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THE STONEMAN

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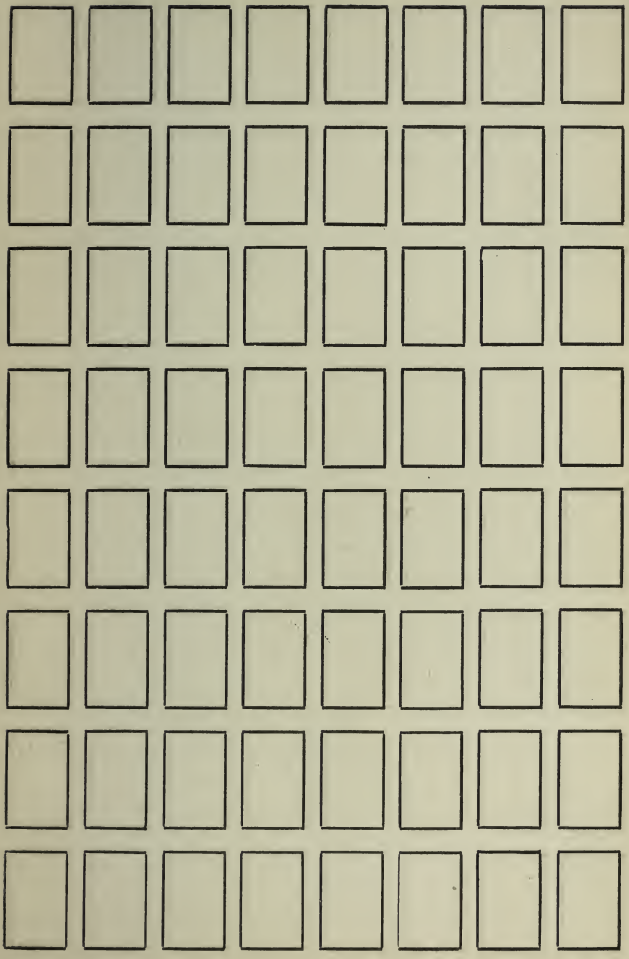
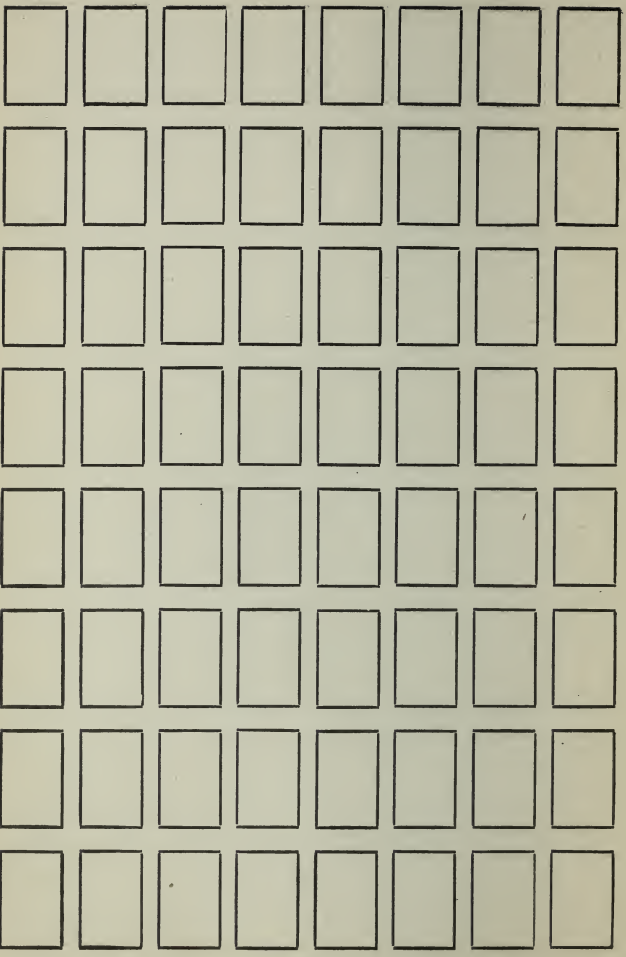
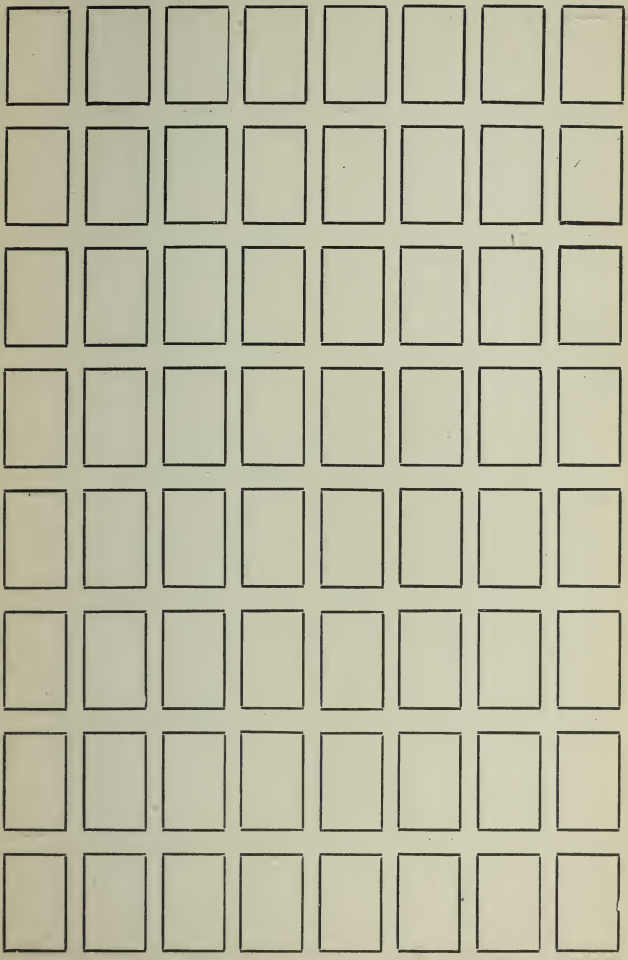
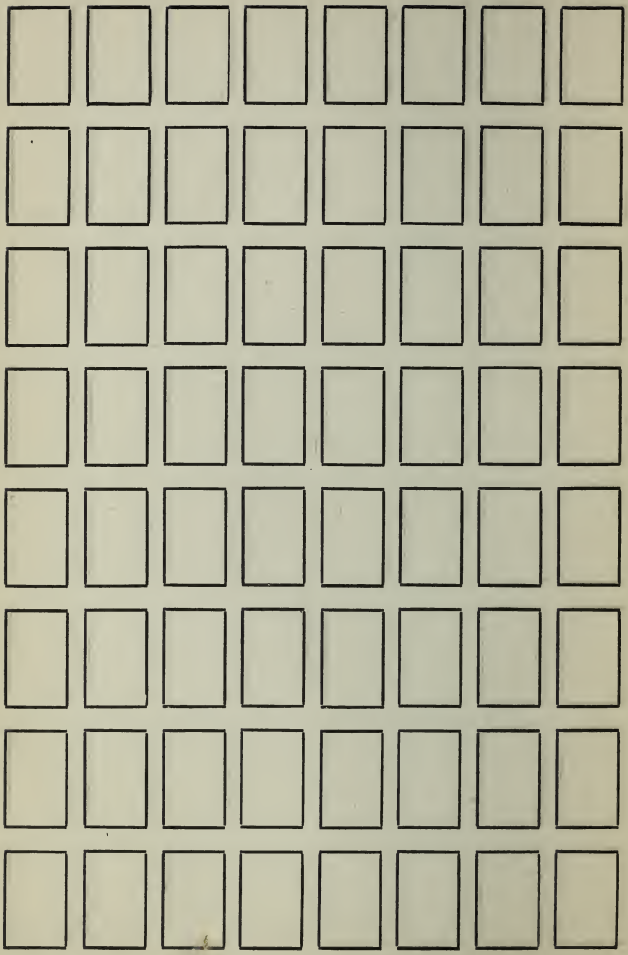
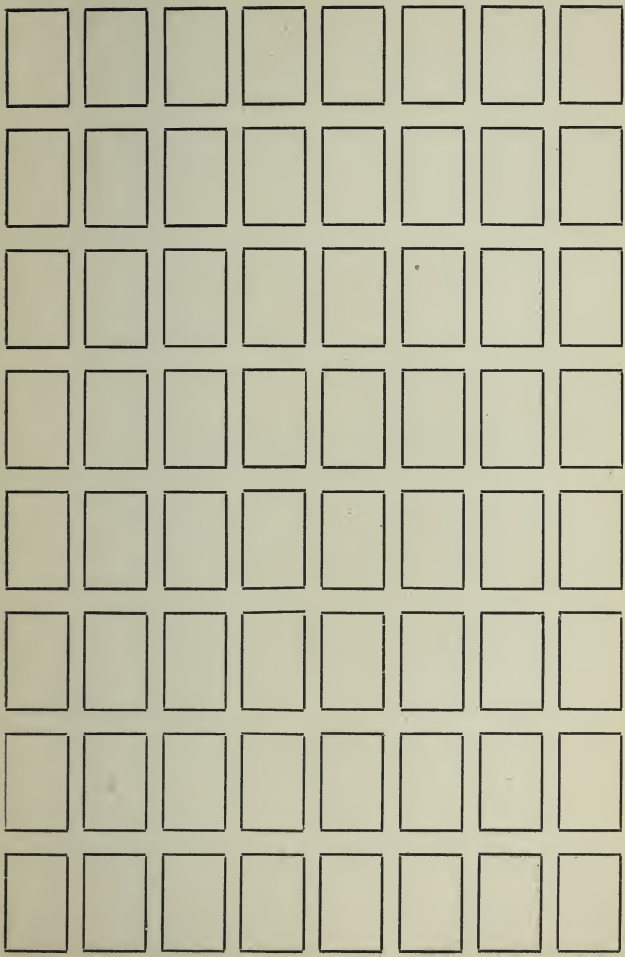
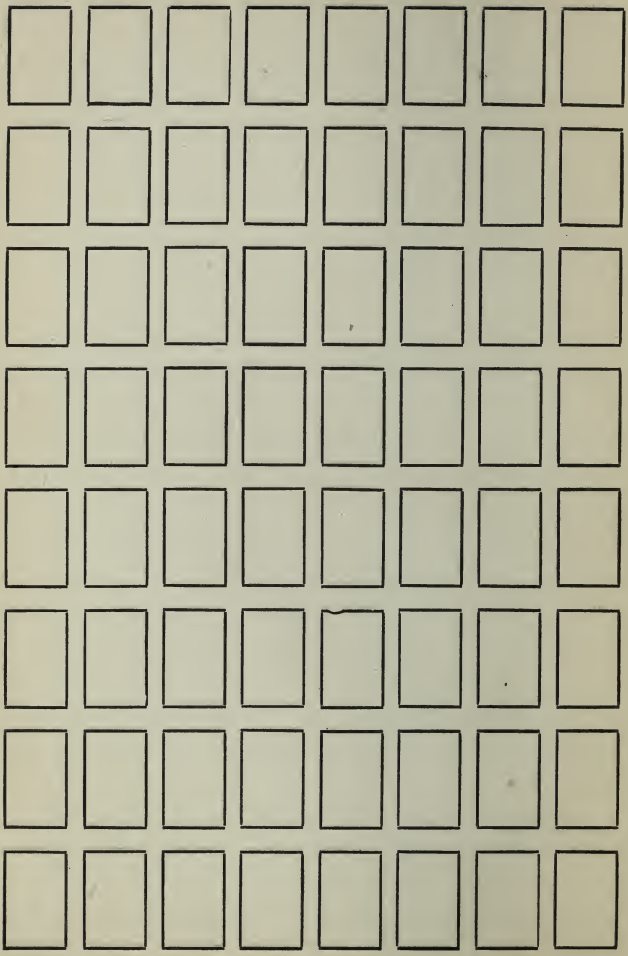




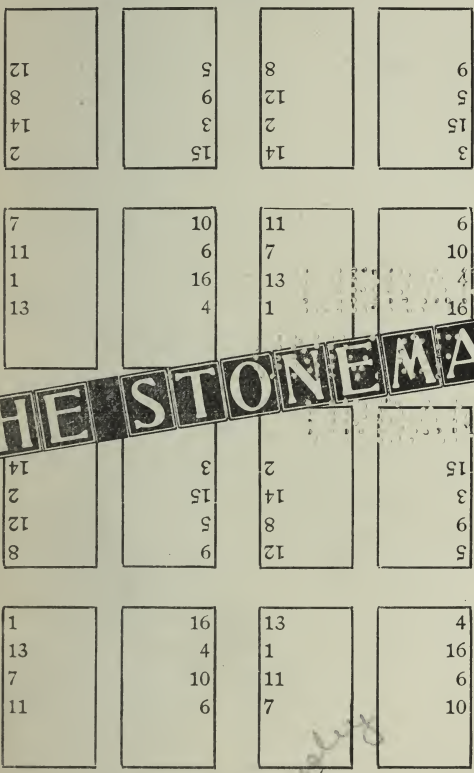








The Science and Art of Imposition



THE STONEMAN

By CHARLES W. LEE
CHICAGO, ILL., U.S.A., 1904

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June 16, 1904
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Publishers' Printing Company
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The Stoneman

Presents the subject of imposition in an entirely new manner and by a simple, direct and scientific method. The exposition of the philosophy and the evolution of stonework as shown in this book will enable the student to comprehend the possibilities of the subject as a science; to trace the development of forms from the folio to the quadruple sextodecimo; to understand the simplicity and uniformity of the various transpositions, and to see clearly the reasons for employing certain methods of arranging initial pages; margins; gripper edges; dividing forms for sheetwise work; the correspondence of the "plan" to the "fold," showing the direction of the turn for "perfecting" on all forms by means of the "wave" rule and the location of the pages for the "fold." The subject is treated from start to finish in a simple and original manner, presenting many vital facts and principles of stonework that have never before appeared in print.

Stonework is almost infinite in its possibilities, and to understand the subject thoroughly requires work, study, experiment and investigation. Imposition is not a bundle of mathematical calculations, nor the folding and marking of a sheet of paper, nor a few tricks that mystify only the uninformed, but its principles are plain, well defined and easily understood. Hitherto this subject has not been treated in a manner worthy of its importance. The entire process of preparing a series of pages for the press comprises a number of details the neglect of any one of which may cause extra work and expense in other departments. The printer who wants to become a stoneman should practice the silent processes known as mental arithmetic; he should study the work so thoroughly that he can mentally "see" the whole operation of properly imposing a set of pages; he should be on the lookout for better methods,

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labor-saving devices and "different" ways of doing work if they promise better results. Work and study must be combined to make the intelligent stoneman.

THE STONEMAN shows, in an original manner: The true method and order of the development of forms and transpositions of sections; the division of the form into sheetwise sections, the direction in which the sheet is turned and the point of separation of the printed sections by means of the "wave" rule; the positions of the printed pages and the direction of the turn by means of the "fold"; the four methods of determining sheetwise sections; the determining of margins as shown in diagrams "A" and "B"; the proper location of the folio number; the showing of "markers" in variable forms; the possible and practical initial positions; the names and sizes of paper; the sizes of the pages on 24x36, 25x38, 28x42 and 32x44 paper in work and turn and sheetwise forms; the method of calculating amount of stock for one to 21 forms of 8, 12, 16, 24, 32, 64, 96 and 128 pages for 500 copies' work and turn, and sheetwise; a complete exposition of "legal" and Dexter standard folding machine forms; blank diagrams for the use of the student, and many minor facts and principles.

It should be the ambition of every apprentice to learn all he can of the details of the different branches of the trade, then select a specialty, study its requirements, finish his "time," join the I. T. U. and continue to work and study, because the best student, with sufficient opportunity for practice, will always be the best workman.

THE STONEMAN is not perfect, but it will add something of value to the somewhat meager literature of the craft, and it is hoped that it will do as much for printing as printing has done for

THE AUTHOR.

Chicago, November 12, 1904.

Terms

This list includes only such abbreviations and technical terms as apply particularly to stonework that are not fully explained elsewhere.

Back Pages—The pages in the last half of a folded signature.

Backs—The space between pages (whether type or print) in which the binding is to be done.

Back-Up—To print the second side of a sheet; reiteration; to reverse the press.

Bind—In book making means to fasten together the leaves of a book; in lockup, it means that the pressure is against some misplaced or wrong-size material, instead of the type form.

Bleed—To cut into the print when trimming a job or book.

Broadside—A sheet printed on one side only, and may contain one job or a number of jobs.

Bundle—Two reams of paper, fifty pounds of strawboard, 100 sheets of cardboard.

Collate—As now used in bindery work, means a careful inspection of a "gathered" volume to verify the "connection" of the several signatures.

Color Form—A form to be printed (usually in red) in register with a "black" form.

Crossbars—The "long cross" is a movable or stationary bar extending across a chase the long way, and the "short cross" extends across the chase the narrow way the two bars dividing the chase into four sections. Some chases have four mortises for the "long cross" so that it may be placed nearer the long edges for forms of small pages or narrow margins, thereby bringing the form near enough to the edge of the chase to make the proper press-gripper margin.

Duodecimo—12mo—12°—A sheet folded four times, twelve leaves, twenty-four pages.

Edges—The two long margins of a sheet of paper and of a type form.

Ends—The two short margins of a sheet of paper and of a type form.

Even Page—Any page which is given an even number, such as 2, 4, 6, 8, 10, 12, etc. Folio on left when viewed from head of page.

Fly Leaf—An unprinted leaf in the front or back of a book.

Fold—H. F., hand fold; M. F., machine fold.

A right-angle fold is literally a fold the long way of pages, followed by a fold the narrow way of pages; or, a fold the narrow way of pages followed by a fold the long way of pages.

A parallel fold is two or more folds each in the same direction, either the long way or the narrow way of pages.

Folio—A sheet folded once, two leaves and four pages; page number, usually placed at top, but may be placed anywhere in page.

Form—A page or series of pages locked in a chase

Front Pages—The pages in the first half of a folded signature.

Furniture—Blocks of wood, low-grade type metal or iron, about four picas high, from two to ten picas wide and from four to sixty or more picas long; used in filling blanks in jobs and pages, and for making the margins in a form for cylinder press. Wood furniture is also made in yard lengths, with other dimensions as noted above, and can be cut in lengths to suit any particular job. Steel furniture comes in the standard lengths, three picas wide, square mortises at both ends, and is made up with four pieces which form a "hollow square." This furniture is used in blank book "headings," color forms, or large "blanks."

Gathering—Collecting the signatures (sheets) of a work in their proper order ready for binding.

Half Sheet—Such terms as "sheet," "half sheet" and "quarter sheet" are seldom used at present, as forms are more sensibly described by stating the number of pages they contain.

Halftones—From photographs, in copper, zinc and nickel; three styles, straight edge, silhouette, vignette.

Height-to-Paper—Height of type, .9193"; height of

halftone plates, .918". Scripts, brass rule and brass dashes are slightly below type height.

Imposition—This word, when applied to stonework, means the whole process of preparing a group of pages for the press.

Intaglio—Printing in which the lettering is white, surrounded by black.

Key Form—Page or form before dividing for "color."

Make-Ready—Underlay, building up low type or plates; interlay, building up between plate and base; overlay, building up on cylinder to get impression on the low portions of a form.

Make-Up Rule—A "hump-back" rule used in making up pages and forms.

Octavo—8vo—8°—A sheet folded three times, eight leaves, sixteen pages.

Octodecimo—18mo—18°—A sheet folded five times, eighteen leaves, thirty-six pages.

Odd Page—Any page which is given an odd number, such as 1, 3, 5, 7, 9, 11, etc. Folio on right when viewed from head of page.

Press Proof—A proof from a form on press, before and after make-ready.

Quarto—4to—4°—A sheet folded twice, four leaves and eight pages.

Quirewise—In quires. Work printed in a series of four-page half sheets, each folded once and inserted after the manner of a quire. Also applied to any series of printed sheets that are to be "inserted" in their numerical order. See the table, No. 4, on page 113. Sometimes applied to 4-page sheets printed on the odd pages only, or on the even pages only, as in abstracts for some courts of record, the blank pages being used by the judges for notations of law points.

Recto—Right-hand pages of a book—odd-numbered pages.

Register—Pages in a form so adjusted that they will back each other properly in printing.

Reglet—Wood furniture less than two picas in thickness.

Relief—Printing in which the letters only appear on the paper, in black.

Running Head—The title of a book in a line at top of pages, set in small caps, caps, or italic, with even folio numbers at left and odd folio numbers at right as you stand at head of type page.

Scale Board—Reglet or strip of cardboard on which is marked the margins of a book form; useful in making margins when pages are not uniform in size.

Sexto—6to—6°—A sheet folded three times, six leaves and twelve pages.

Sextodecimo—16mo—16°—A sheet folded four times, sixteen leaves, thirty-two pages. Sometimes called decimo-sexto.

Signature—The word is used in this book to designate a printed sheet or part thereof which is to form a separate and distinct part of a work. A book or other work may be composed of one or several signatures; that is, one sheet containing all the pages, or several sheets each containing consecutive pages of the same work. Signature marks are sometimes used in bookwork where several jobs may be running at the same time, in order to prevent a mixup. Usually the running titles and page numbers are sufficient to insure correct gathering.

Signature marks are seldom seen in good books at the present time. If deemed necessary to use them in order to insure correct gathering, place them in the "trim" margins of the first page of each signature, and they will be cut off in the trimming.

Sheet Delivery—"Delivers" printed side up or down, as desired; enables pressmen to run "outside" or "inside" without turning stock for folder.

Text—Body—All the pages of a work except the cover or introductory pages, contents, index, appendix, supplement, addenda, errata or notes. The main portion of a work.

T. or S. W.—Tumble or Sheetwise.

T.—Tumble.—Means that the sheet is to be turned the narrow way for printing the second side.

Verso—Left-hand pages of a book—even-numbered pages.

W. & T. or S.-W.—Means Work and Turn or Sheetwise.

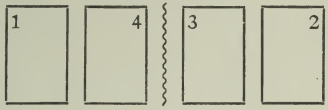
Folio—The Foundation of the Book

1—PLAN—W. & T.

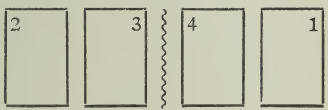
1—*FOLD

1—*FOLD

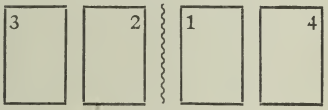
2—PLAN—W. & T.



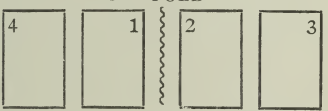
2—*FOLD



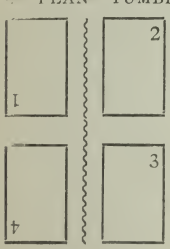
3—PLAN—W. & T.



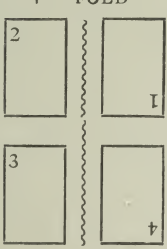
3—*FOLD



4—PLAN—TUMBLE



4—*FOLD



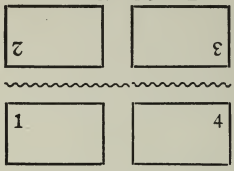
The plans 1 to 8 show the limits for the imposition of 4 pages

*The "Fold" shows the positions of pages on the paper after printing.

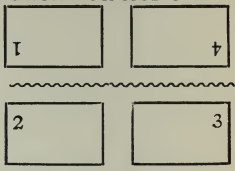
1, 2, 3, 6, 7, 8 are 'work and turn' the long way of the paper; 4, 5 "tumble"—that is, "turn" the narrow way of the paper. The ~~~~ shows where paper is cut after printing.

The Folio

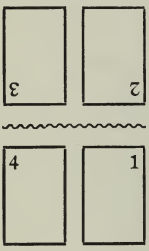
5—PLAN—TUMBLE



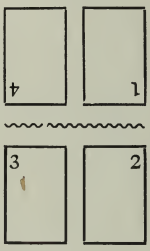
5—BROAD OR MUSIC FOLD



6—PLAN—W.&T



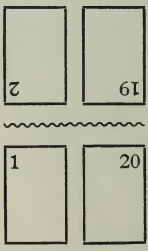
6—FOLD



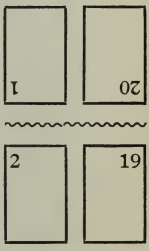
Plan 5 is the Broad or Music form, tho' brass band music is the only kind printed in this manner. This form is now used for illustrated works, catalogs, etc.

Plan 6 is the Hebrew form. As it is read from right to left, the 'run' of the pages is reversed.

7—PLAN—W.&T.



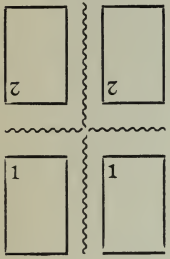
7—FOLD



Plan 7 shows the common form for a 4-page cover for publications of "16 pages and 4-page cover." If the job is to be bound 'saddle stitch,' the margins of the cover should be the same as the margins of the 16-form or "body;" in this form of cover, pages 1 and 2 must always occupy the positions shown in the diagram, while 19 and 20 may be changed to any other numbers required to 'cover' a publication. In jobs of this kind the 'body' form begins with page 3; if the cover contains 8 pages the body begins with page 5.

The Folio

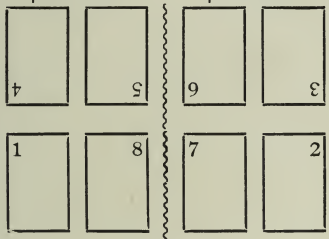
8—PLAN—W.&T. "TWO ON"



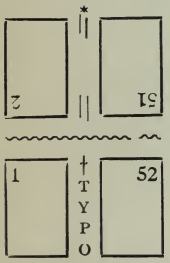
Plan 8 is for a 2-page job "two on," that is, two 2-page forms to be run on each side of the paper, giving four 2-page leaves. There is no 'fold,' as four consecutive pages are required for a fold.

The Quarto, 4to, 4°

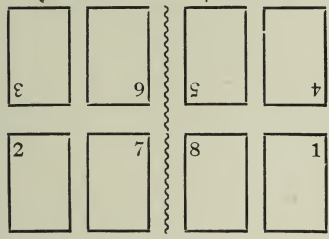
10—PLAN—W. & T., OR SHEETWISE



9—PLAN—W. & T.



10—FOLD



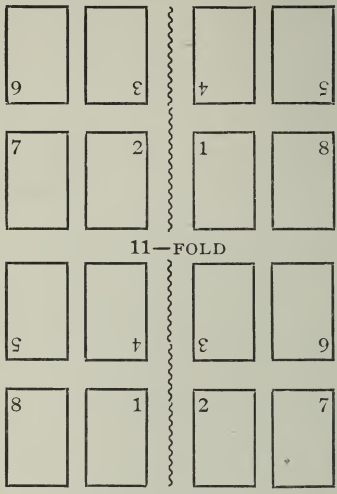
9—Fold—See Fold 7

Plan 9 is a 4-p. cover form for a 52-p. side-stitched job. The four short *rules between pp. 2 and 51 are the guides for folding the cover over the 'body;' the space on each side of them should be the same and that between them must be equal to the thickness of the work. The †'backbone' (if used) is treated in the same way.

Plan 10 is the common 8-page form and may be run work and turn—one form or ‡sheetwise—two sections.

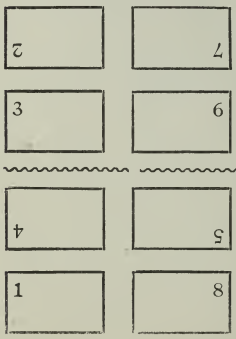
The Quarto

11—PLAN—W. & T. OR S.-W.



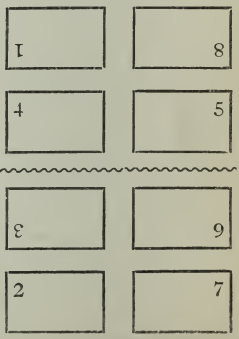
Plan 11 is 'made up' from the inside and is the same as plan 10 except that the two vertical 4-pages are transposed. The fold is the same as fold 10. No transposition of pages of a form can be made except by moving the pages in sections of 4 pages or multiple of 4 pages, and a form of any shape may be made up in as many different ways as there are 4-page sections in the form. This rule is here stated for the first time in a work of this kind. There is no 'mystery' in stone work.

12—PLAN—W. & T.



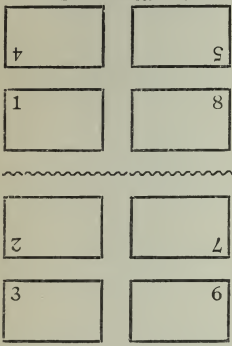
Plan 12 is a form of 8 broad pages and may be imposed from inside.

12—FOLD



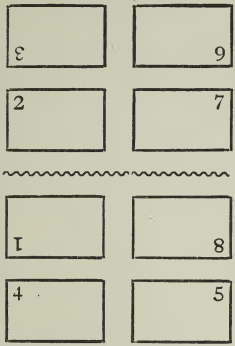
The Quarto

13—PLAN—W.&T. OR S.-W.

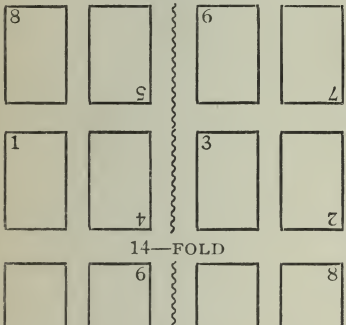


Plan 13 is plan 12 with the two vertical 4 p sections transposed. The fold is similar to that of fold 12.

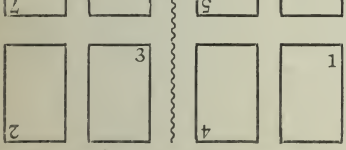
13—FOLD



14—PLAN—W. & T. OR S.-W.



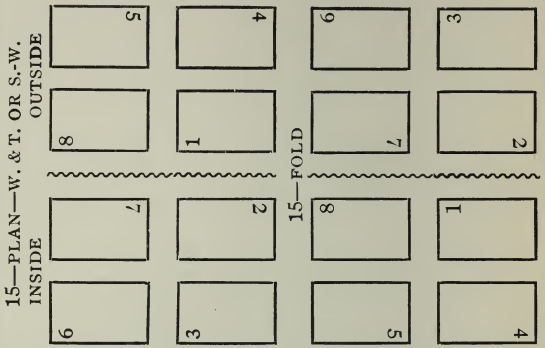
14—FOLD



Plan 14 is used for booklets the "legal cap way"—that is, the leaves are opened from you. This form is not often used, but is a good one and the stoneman may be required at any time to use it. The form may be printed in sheetwise manner, same as plans 10 and 11. The head margins are the 'backs' in a form of this kind—the margins lengthwise of the pages being trim margins.

The folds are toward you, starting with 2 at right hand.

The Quarto

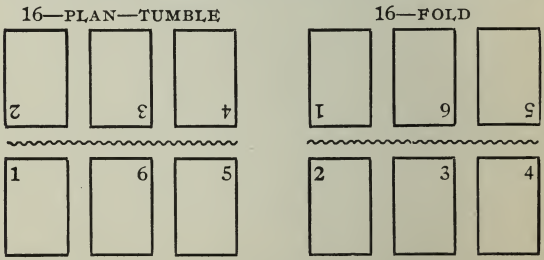


Plan 15 is similar to plan 14 except that the two vertical 4-page sections are transposed laterally.

The Folder

Folders may be of any 'even' number of pages, tho' the 'folder' forms are used mostly for work that cannot be made up in the regular way because the number of pages is not a multiple of 4, such as 6, 10, 14, 18, 22, etc., or, as in railroad work, a map may occupy the inside.

All the margins of all the pages of a folder should be equal, as they are not trimmed after folding, and the stock must be cut to the exact size before printing.

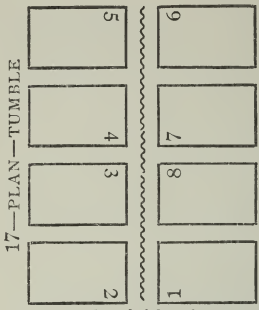


Folders

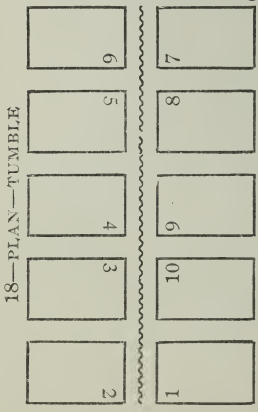
Forms for folders must be made up as carefully as any other style of form. If no instructions are given the stoneman as regards the margins of a folder form, he will make all the margins of the pages the same—back, front, top, bottom—as an ordinary folder is not bound nor trimmed after printing. Some folders are now made up so that four or eight pages will print on each leaf, the leaves saddle stitched and trimmed; in leaves of eight pages the work is given two parallel folds the narrow way of the pages, if four pages to leaf, one fold, after trim. Either edge of form may be made the gripper edge.

The plans for folders—see plan numbers 16, 17, 18, 19, 20, 21, for 6, 8, 10, 12, 14, 16 pages—show the wave rule through the middle of the forms between the heads where the sheet would be cut in half after the second printing, if the work is a plain "ribbon" folder; if there is to be a map or diagram on one side of the sheet there will be no cutting apart after printing, but the whole sheet must be folded once the narrow way, with the pages outside, and then as many parallel folds to the left as may be required. It will be noted that the pages follow each other around the form in a similar manner in each of the six folder plans. All folders are imposed in this way, whatever the number of pages they may contain. It is sometimes necessary to impose several folders each of an equal number and size of pages, or the same folder in duplicate, triplicate or quadruplicate. In any of these cases the pages are arranged in the same manner as above described, but the rows of pages of the first folder are placed at opposite ends of the form, and the pages of the second folder placed in the middle, making four rows of pages in the form; if for three folders, the rows of pages are arranged with the three rows each containing page 1 in one end of the form and the three rows each containing page 2 at the other end. If the form contains four folders the eight rows of pages are divided in a manner similar to the two and three-folder forms, but with four rows of pages in each half of form. Double, triple and Quad. folder forms are W. and T. or S.-W.

The Folder



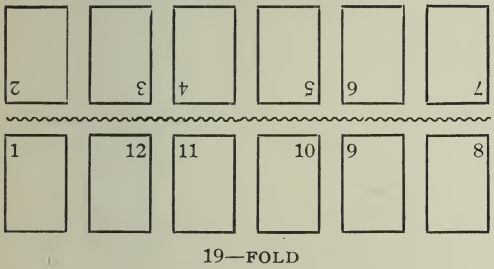
The regular folder forms, whatever the number of their pages, are made up in the manner here shown, the pp. being placed in consecutive order. Begin with page 2 at the upper left-hand corner and follow to the right in rotation, head of page toward you, placing one-half the pp. in this manner. Place the next p. at the lower right-hand corner, foot toward you, placing the other pp. to the left, in order, finishing at the left-hand with p. 1.



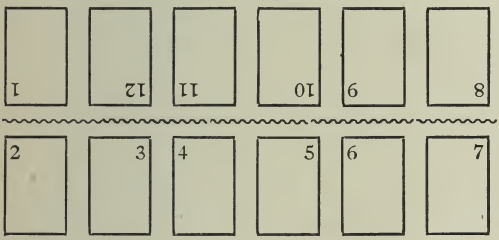
The Folder

The folds' of a folder are parallel, except where sheet is not cut in half lengthwise after printing, as in a railroad folder with a map covering one side of the sheet.

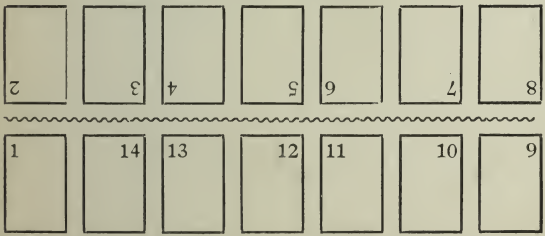
19—PLAN—TUMBLE



19—FOLD



20—PLAN—TUMBLE



The Folder
20—FOLD
1
14
13
12
11
10
9
2
3
4
5
6
7
8
21—PLAN—TUMBLE
9
8
7
6
5
4
3
2
10
11
12
13
14
15
16
1
21—FOLD
10
11
12
13
14
15
16
1
9
8
7
6
5
4
3
2

Machines and Materials

The press builders, in order to meet the ever-increasing demands of publishers and printers, have improved their machines almost to the point of perfection. The improvement in machines has brought about the improvement of every other device used in printing, binding and paper making.

Among the many devices for the rapid, economical and successful making and handling of printed matter may be mentioned:

The two-revolution cylinder press, which has increased in size from super royal (20x28) to 48x65; the composition inking roller, and the roller-washing machine; the use of electricity for power; the power paper cutter; larger and faster paper-making machines; greater variety and better grades of paper; book trimmers; folding and feeding machines; wire stitching and thread sewing machines; book rounders and backers; larger and better chases; type-setting machines; ruling machines; electrotyping; stereotyping; halftone and line engraving; plate mounting machine; the power molding press; circular saws; trimmers; planers; routers; mortisers; improved type and composing-room appliances; "patent" blocks; patent make-ready; numbering machines; color-printing devices; the rotary press; the sextuple newspaper press; the "fudge" cylinder for printing portions of the first page of newspapers in colored ink; improved methods of stereotyping; iron and steel quoins and improved keys; counters and numerous other time-saving and money-making inventions.

THE LINOTYPE

The Linotype produces "movable" type that is easy to handle, easy to lock up and the printing from the slugs is as good as from ordinary type. This machine has reduced the worry of the stoneman and greatly increased the amount of lock-up to be done—two blessings that all stonemen ought to appreciate.

CHASES

Chases are made of cast iron and wrought iron for job presses and electrotype forms; wrought iron, low-

grade steel and good steel for cylinder presses and stereo forms; there are single, twin, poster, cross-bar, shifting-bar and screw chases; job, foundry, book, poster, stereo and news chases.

Heavy chases made of the best steel are the only good kind. Cast steel chases will withstand a pressure at the corners of 19,000 to 43,000 pounds to the square inch. Electric-welded chases are the strongest and best, and the method of manufacture produces a chase that is absolutely true.

When a chase is bent "out of true" it is impossible to secure good register in printing.

See that the chase is "right" side up when placing it around the form.

In ordering chases, give the length and width in inches "inside" measurement if for a certain size of stock, "outside" if for a certain size of press. State if "long" or "short" crossbars, or both, are wanted; bar to shift or only one position, and the width of the short crossbar. The "long cross" is always made 4 picas wide, unless ordered otherwise.

Quoins and keys are necessary in locking forms, but the necessity for good quoins and good keys is not always recognized by master printers. The Hempel quoins are in general use—and there are none better—but the keys used in some offices are nothing short of horrible examples of worthlessness. The Challenge quoin key is the best of its kind, and it is almost indestructible. A key with a long handle for use on large forms on large presses is needed, as it would save time in unlocking at press.

PAPER

A knowledge of paper sizes is essential to the stoneman, if he would proceed with his work to the best advantage. This knowledge enables him to make effective use of the foot rule, so that he does not need to see the paper for a form. The two pages of paper tables shown herewith contain all the regular sizes, names and kinds of paper; also sizes of untrimmed pages; number of forms, type pages and quantity of paper for 500 copies for work in forms of four to 128 pages.

Paper should be somewhere near the size of the form upon which it is to be printed.

CORRECTIONS.

Page 21—first column, 15th and 16th lines should read "22x28 Super Royal" and "21x32 D'ble Demy."

Page 67—last word of first paragraph should be "35" instead of 31.

Page 92—plan 79, head to head with page 18 should be "31" instead of 13.

Page 131—first word of 15th line should be "sixteens" instead of sixteenths.

Paper—Names and Sizes

FLAT WRITING

5½x8½	Comr'l Note
8½x11	Letter
8¼x13½	Banknote 4
10x16	Flat Letter
12x19	Pack't Post
14x17	Flat Cap
15x19	Crown
16x21	Demy
17x22	Folio
17x24	Check Folio
17x28	Double Cap
18x23	Medium
19x24	Royal
20x28	Super Roy'l
21x32	Sup'r Royal
22x28	D'ble Demy
22x34	D'ble Folio
23x28	Elephant
23x31	Imperial
23x34	Colombier
23x36	D'bl Medi'm
24x38	D'ble Royal
26x33	Atlas
31x53	Antiquari'n

— Other Sizes —

13x16	19x23	22x30
16x20	19x28	22x32
16x26	19x30	25x40
16x42	19x48	27x40
18x24	20x24	28x34
18x46	20x25	30x38

— BOOK —

Deckle*	Regular	
10x28	22x32	28x42
12x18	24x35	30x44
14x21	24x36	30x45
16x22	25x38	30x46
19x25	26x40	31x44
22x32	28x40	31x45

*Fracti'ns omitt'd

BOOK

32x44
33x44
33x45
34x46
35x48
35x51
36x40
36x48
38x50
40x48

COVER

14x21
16x22
19x26
20x25
20x27
22x28
22x29
22x32
22x34
24x36
25x38
26x40
27x40
28x42
28x44
28x45
30x40
30x44
30x45
31x44
31x45
32x44
32x46
34x46
34x47
35x48
36x40
40x48
40x50

NEWS

5f-20x26
6f-22x31
6f-22x32
7f-24x35
7f-24x36
8f-26x40
9f-28x44
9f-28x47
4q-22x31
4q-22x32
5q-26x40
6q-30x44
6q-32x44
7q-35x44

— Other Sizes —

20x25
20x30
22x28
25x38
28x42
36x48
38x50
39x53

f-Folio
q-Quarto

MANILA

— 13x18
— 15x20
— 17x22
— 18x23
— 18x24
— 19x24
— 20x30
— 24x36
— 24x38
— 26x40
— 30x40
— 36x40
— 36x48
— 40x48
— 48x60

SPECIALS

Carbon: 16x21, 16x26, 16x28

Drawing: 17x22, 17x26, 20x24, 22x28, 24x30, 24x32, 24x36

Glazed: 17x22, 20x24, 21x40, 22x26, 24x24, 24x26, 24x32

Gummed: 17x22, 20x24, 20x25, 22x28, 28x44

Legal: 8½x 7, 8½x10, 8½x14

Music: 14x22, 22x32, 28x44

Straw: 19x24, 20x44, 24x38

Tissue: 11x16, 16x19, 19x32, 20x24

Wax: 24x36, 26x30, 26x36

U.S. Chart 40x50

BOARDS

Cardboards: 17x28, 18x22, 18x28, 22½x28½, 22x28, 20x24, 20x40, 24x30, 24x32, 24x36, 25x28, 28x44, 36x48, 39x45, 40x56

Binder's: 18x33, 17x28, 20x28, 20x30, 26x38

Press: 21x31, 28x36, 28x34

Also in rolls

Straw: 26x38, 31x40, 31x42

50 lb bundles

Blotter: 17x28, 18x23, 21x25, 21x32, 19x24, 24x38

Envel'pe, Doc., Tel., Tissue

Paper—Sizes of Untrimmed Pages

Size	4-p.	8-p.	12-p.	16-p.	24-p.	32-p.
24x36	*12x18	9x12	8x9	6x9	6x6	3x9
	†18x24	12x18	12x12	9x12	8x9	6x9
25x38	*12½x19	9½x12½	8⅓x9½	6¼x9½	6¼x6⅓	4¾x6¼
	†19x25	12½x19	12½x12⅔	9½x12½	8¼x9½	6¼x9½
28x42	*14x21	10½x14	7x14	7x10½	7x7	5¼x7
	†21x28	14x21	14x14	10½x14	7x14	7x10½
32x44	*16x22	11x16	8x14⅔	8x11	5½x11	4x11
	†22x32	16x21	14⅔x16	11x16	10⅔x11	8x11

* The first line of figures opposite each size indicates the sizes of untrimmed pages for a "work and turn" form.
†Each second line indicates the sizes of the untrimmed pages for a "sheetwise" form.

Forms, Pages and Paper Required for 500 Copies.

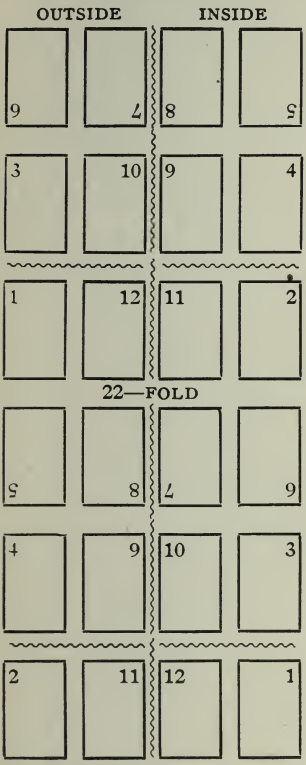
Fr'ms	8-p.	12-p.	16-p.	24-p.	32-p.	64-p.	96-p.	128-p.	No. of sheets W. & T.	No. of sheets Sheetwise.
1	8	12	16	24	32	64	96	128	250	500
2	16	24	32	48	64	128	192	256	500	1000
3	24	36	48	72	96	192	288	384	750	1500
4	32	48	64	96	128	256	384	512	1000	2000
5	40	60	80	120	160	320	480		1250	2500
6	48	72	96	144	192	384	576		1500	3000
7	56	84	112	168	224	448			1750	3500
8	64	96	128	192	256	512			2000	4000
9	72	108	144	216	288				2250	4500
10	80	120	160	240	320				2500	5000
11	88	132	176	264	352				2750	5500
12	96	144	192	288	384				3000	6000
13	104	156	208	312	416				3250	6500
14	112	168	224	336	448				3500	7000
15	120	180	240	360	480				3750	7500
16	128	192	256	384	512				4000	8000
17	136	204	272	408					4250	8500
18	144	216	288	432					4500	9000
19	152	228	304	456					4750	9500
20	160	240	320	480					5000	10000
21	168	252	336	504					5250	10500

'W. and T.' forms produce ½ sheets—all pages in the form print on each side of the paper. 'Sheetwise' forms produce full sheets—½ the pages of the form on each side of the paper, the "outside" and "inside" sections.

Increase quantity of paper for greater No. of copies.

The Sexto, 6to, 6°

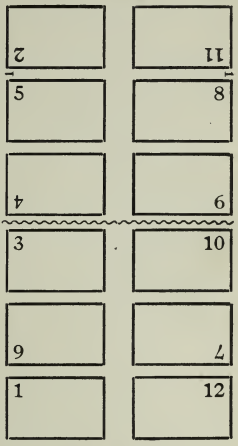
22—PLAN—TUMBLE OR S.-W.



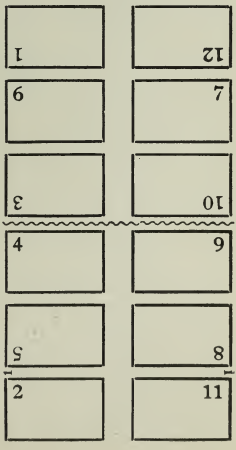
22—FOLD

Plan 22 is a 12-p. with cut-off; may be given two folds before cutting off 1-12, 11-2. Plan 23 is the broad 12 without cut-off. See 24-26 and 25-27 for transpositions of these two plans.

23—PLAN—W. & T. OR S-W



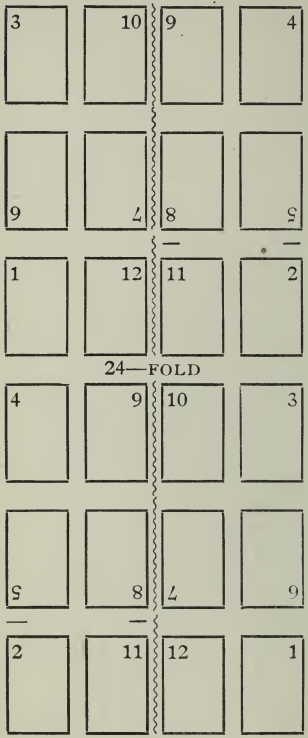
23—FOLD



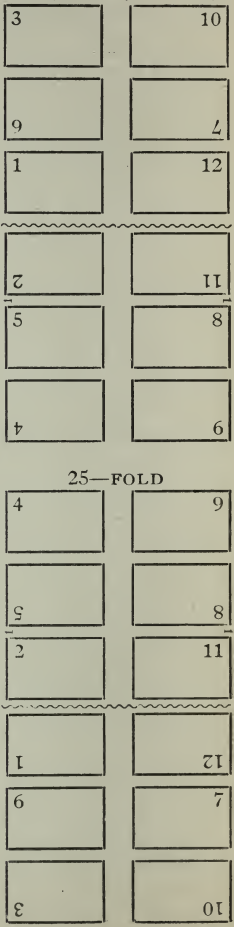
The Sexto

24—PLAN—TUMBLE OR S.-W.

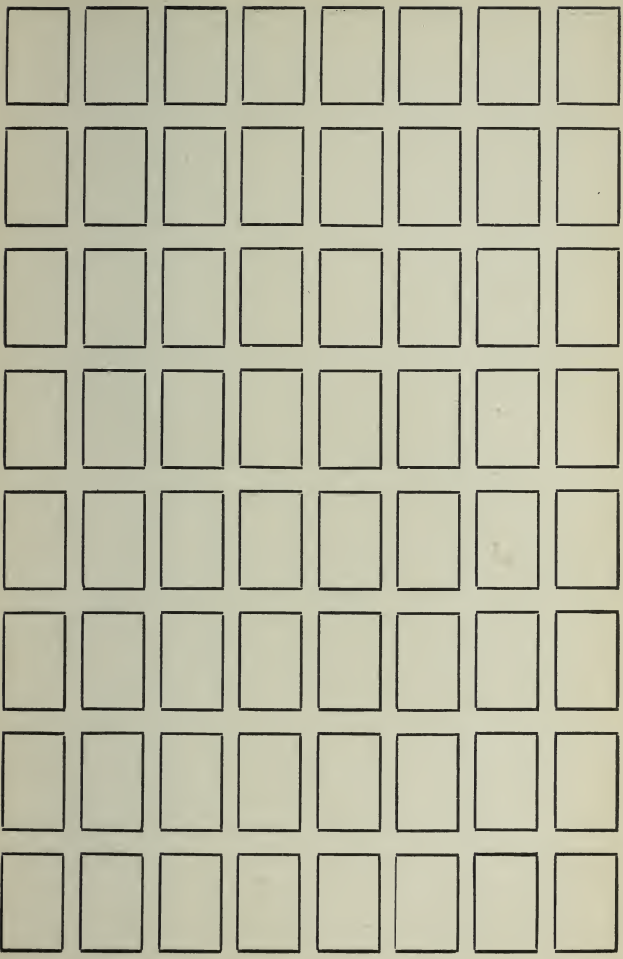
OUTSIDE INSIDE

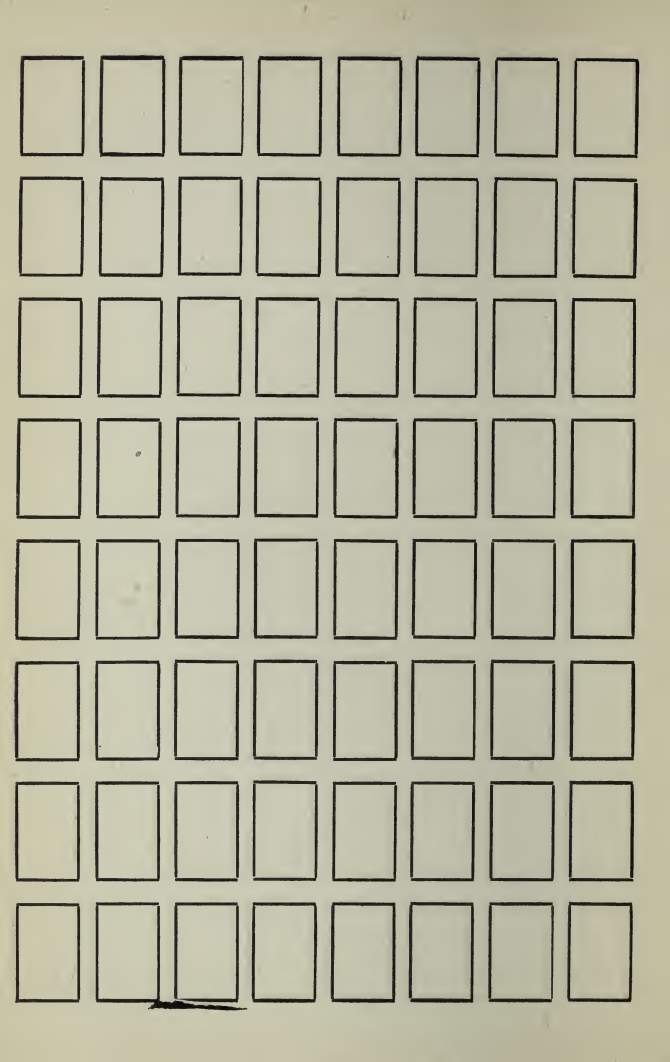


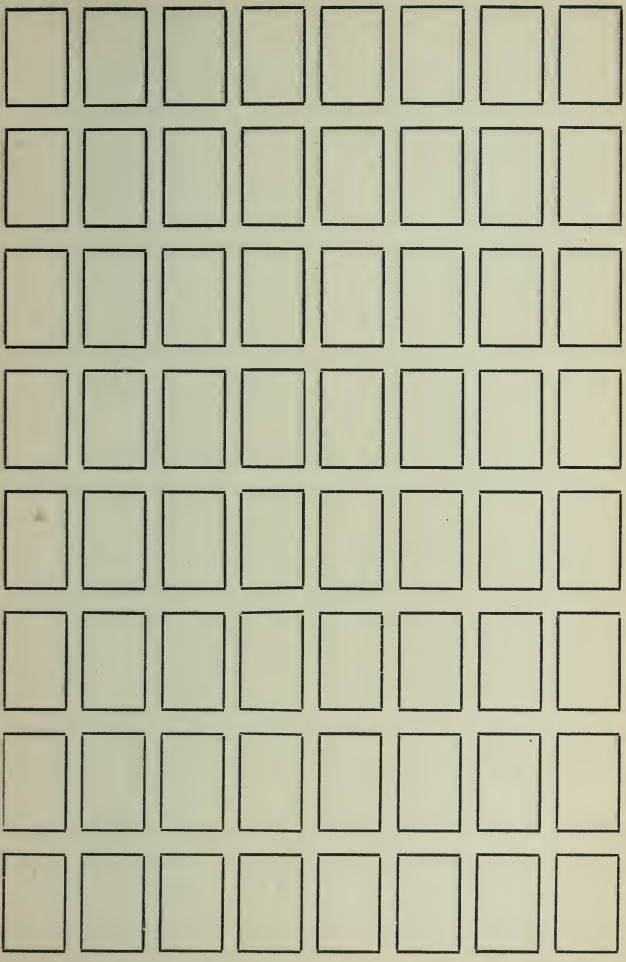
25—PLAN—W. & T. OR S-W

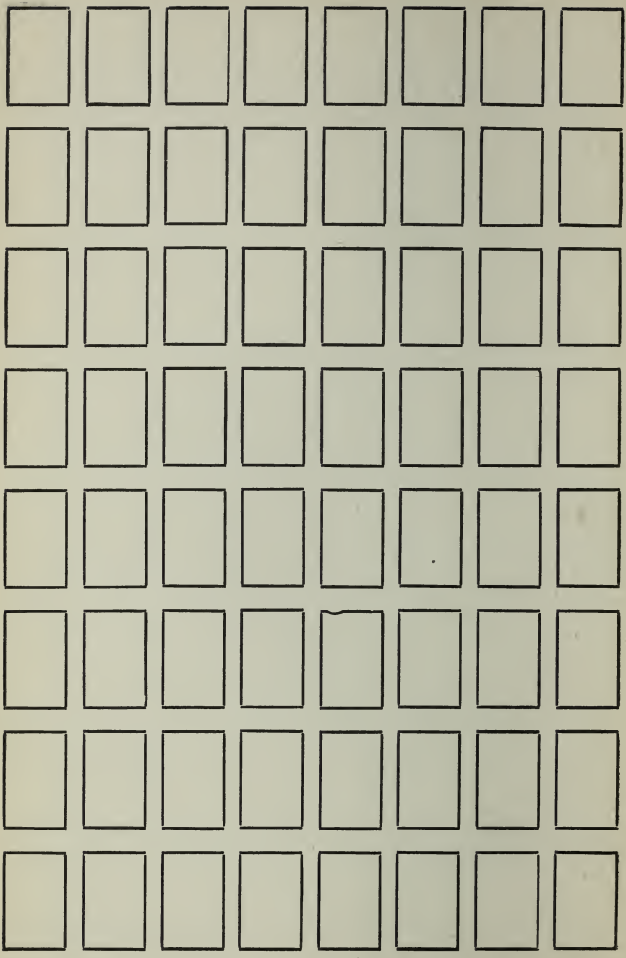


Plan 24 is a 12–p. without cut-off, being plan 22 with pp. 3-10, 9-4 placed at the head of form. Plan 25 is the broad 12, being a vertical transposition of upper and lower halves of plan 23.



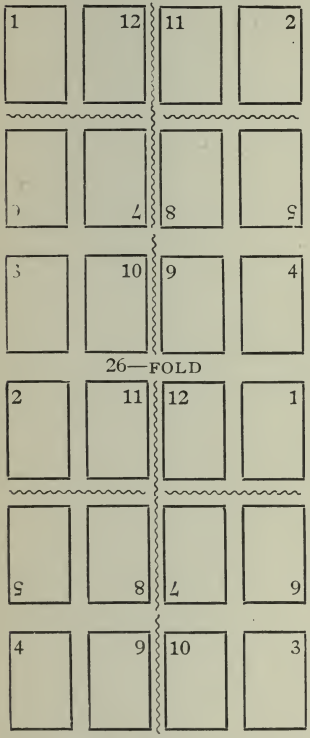




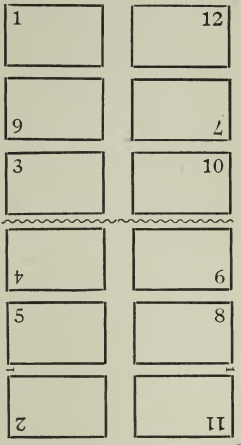


The Sexto

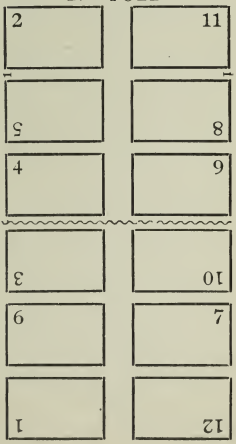
26—PLAN—TUMBLE OR S.-W.



27—PLAN—W & T. OR S-W

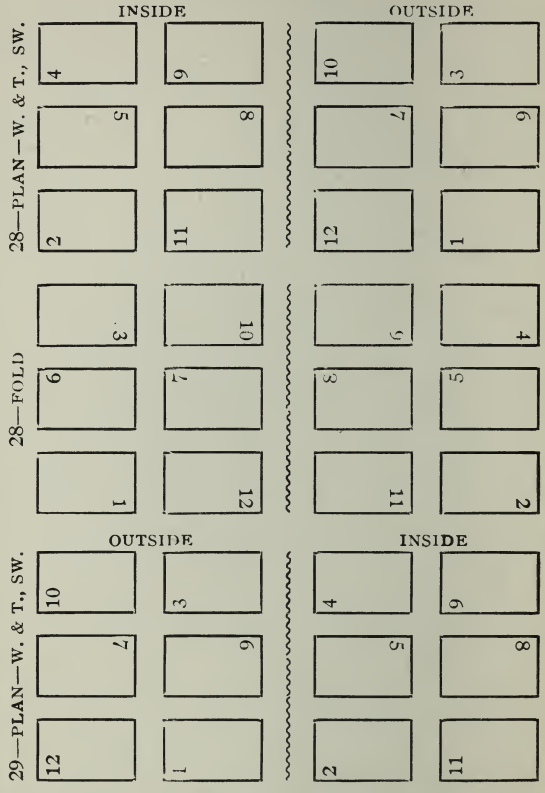


27—FOLD



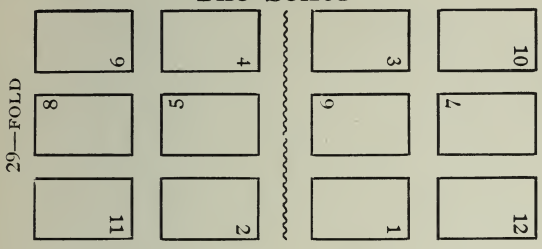
Plan 26 is a 12-p. with cut-off, being plan 22 with pp. 1-12,11-2 placed at the head of form. Plan 27 is the broad 12, being a vertical transposition of the three 4-p. sections of plan 23.

The Sexto

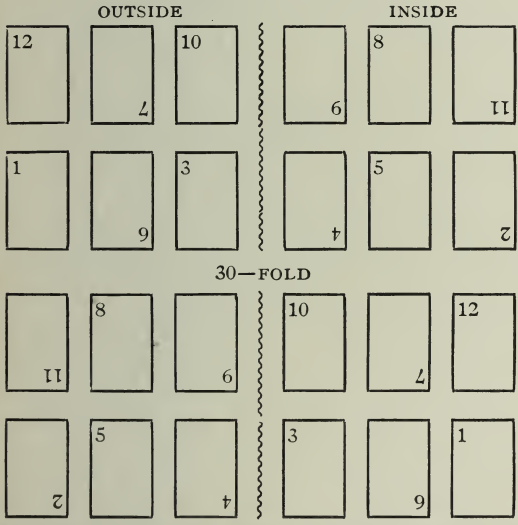


Plan 28 is a 12-page form the "Legal" way, and, like all other forms of multiples of four pages, can be imposed in three different ways, as there are three 4-page sections in the form. Plans 29 and 30 show the changes.

The Sexto



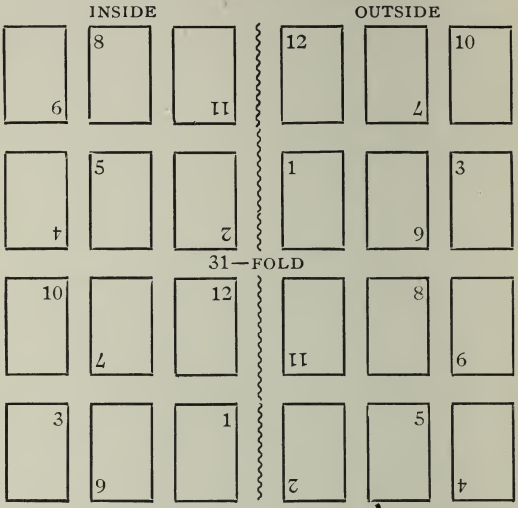
30—PLAN—W. & T. OR SW.



Plan 30 is plan 28 with the two lateral 6-page sections turned half-round and placed alongside of each other, producing the "long" Legal 12-page form. The two lateral 6-p. sections of plan 30 also may be transposed.

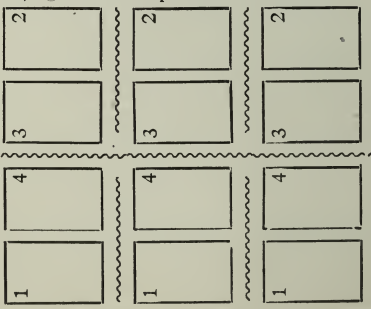
The Sexto

31—PLAN—W. & T. OR SW.



Plan 31 is plan 30 with the two lateral 6-page sections transposed laterally, producing the "long" Legal form of 12 pages made up from the center.

32—PLAN—TUMBLE OR S.-W.



Plan 32 shows a 12-page form of three 4-page sections; useful for small covers 'three on,' three different 4-page jobs, or three 4-p. insert sections of the same job, by changing p. Nos.

Makeup

Pages are oblong—one-half longer than their width; broad—one-half wider than their length; square, and long and narrow. The width and length of the paper on which any of these shapes of pages is to be printed should be large enough to allow ample margin of white paper around the page after binding and trimming. The man who plans the work should choose a size of type page and paper page that will enable the printer to produce a creditable piece of work. The stoneman must take the page and the paper "as they come." His task is easy if the work has been intelligently planned.

The diagonal of a page, from the folio number to the opposite lower corner, should be twice as long as the width of the page, according to the law of proportion. According to some authorities on bookmaking, the length of a properly shaped page should be one and a half times its width.

In imposition, the page is always considered from the foot; in makeup and folding, the page is considered from the head.

JUSTIFICATION

Justification of type lines in the stick prevents loss of time at stone, prevents spoilage at press, prevents adverse criticism of the job by the customer and gives all hands a feeling of satisfaction that follows work well done. Before a line can be properly justified it must be squarely on its feet.

Pages should be made up very carefully to the proper width and length in the galley and securely tied before being placed on the stone or on the letter board, because the little defects are more easily discovered and more quickly remedied in the galley than in the form. The stoneman does not discover the defects in a form until he attempts to lift it, and then he must

often try and sometimes try again before the faults of the compositor or makeup are corrected. Printers who understand the requirements of stonework will do better composition than those who are not familiar with such work, because they will more fully appreciate the necessity for accurate and uniform justification of the lines and sections of a type form.

In the makeup of pages of linotype slugs, where no handset matter is used, it is not necessary that columns or pages be justified so carefully as if type were used, because the lockup will hold the slugs without much danger of pi, though where pages are to register it is necessary to make them to a uniform length. Any description of good furniture may be employed for "dressing" a form of linotype pages, except where the work is of high class, requiring good register. Of course all the work of the stoneman ought to be well done—as well as circumstances will permit—but there are times when haste is absolutely necessary. In most of this work, it is best to lock each outside page separately at the foot—with two quoins if the pages are not very small or very large—as any variation in the length of the pages next to the lock-up will not affect the other pages.

It is now the custom to use reglet instead of brass for column divisions in linotype pages. If slugs work up, place narrow strips of cardboard on each side of column reglet. The lockup will then hold the slugs in place.

To "break up" leaded linotype, lift a section of the matter, turn it upside down, lift and let fall a few times to loosen the leads, then lift slugs with thumb and forefinger, two, three or four at a time, leaving the leads in rows, which may be easily gathered up, straightened and put into the rack. The merit of this method is that it is rapid and does not leave the leads in a heap to get bent.

THE BOOK

The word "book" means, in this connection, any printed work of whatever character, containing four or more pages.

The first book to have its pages numbered was Æsop's Fables, printed in 1484. The first printed books

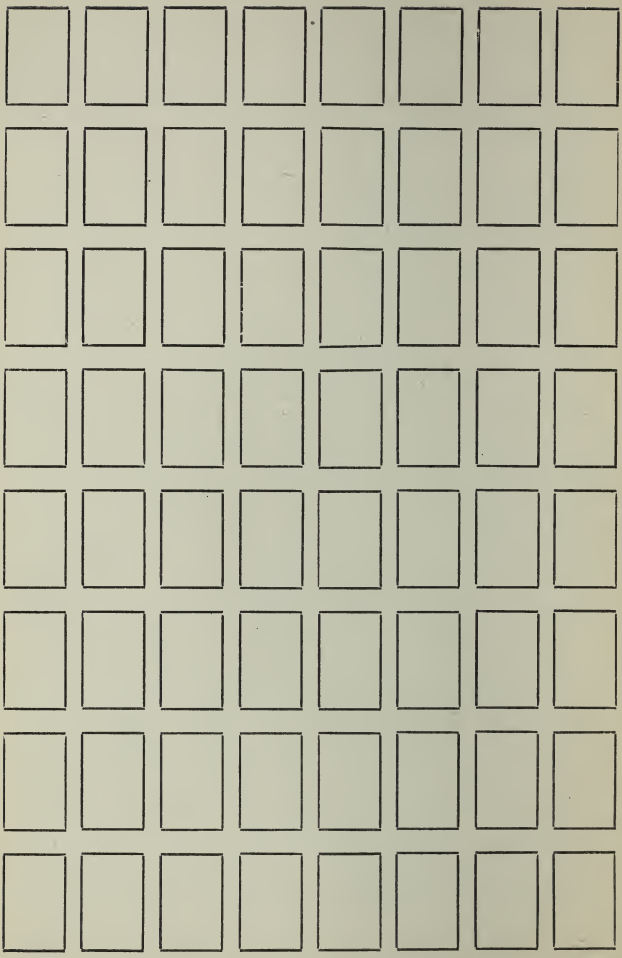
had their leaves printed on one side only, and the two blank pages were pasted together.

THE LEAF

A leaf has two pages. The smallest sheet that can be used as a section of a printed book contains four pages and two leaves. If the book has been printed in signatures of 16 pages, the first four leaves of the first signature will contain the first eight pages and the second four leaves will contain the second eight pages; the first four leaves of the second signature will contain the third eight pages and the last four leaves of this signature will contain the fourth eight pages, and so on to the end of the book. This description, with the necessary modification for signatures of the different sizes, applies also to 4, 8, 20, 24, 32, 36, 40, 48 and 64-page forms of single sections and to one 12-page hand fold (folds 24, 27, 58), but does not apply to the product of the 12-page Dexter Single Marginal Book Folder, shown in upper half of plan 91, as this fold gives 4 pages in front and 8 pages in back, nor to the product of the 12-page Dexter Newspaper and Periodical Folder, as this fold gives 8 pages in front and 4 in back, as shown in the lower half of plan 91. These two machine folds necessitate a side stitch—a method of binding never resorted to in the making of good books.

SPECIFICATIONS

The specifications used in describing books are of little value, because they seldom contain definite information. The size of the untrimmed paper in inches and the grade should be stated; then the number of leaves in each signature, as 8vo, 16mo, etc.; the number of pages, the kind and style of binding, and the price. The standard sizes of book paper range from 22x32″ to 40x48″, with about twenty sizes between, so that merely to say that a book is an "8vo" means that the signatures contain eight leaves, but gives no hint of the size of page. It is true that many books are described by giving the "name" of the paper (see first column of "Paper-Names and Sizes"), but even that may be misleading, as some names have two sizes, besides imported paper, which seldom comes in "American" sizes, may have been used.



The Octavo, 8vo, 8°

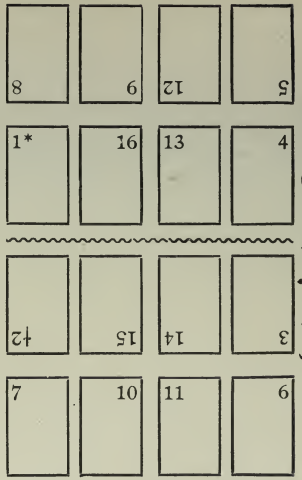
33—PLAN—W. & T. OR S.-W.

Plan 33 is the common 16-p. form and is the basis upon which all variations are built.

33—FOLD

33 is the common fold, but is not easily folded in the usual manner, without turning sheet

34—PLAN—W. & T. OR S.-W.



*Outside. †Inside. Plan 34 is a transposition of the upper and lower halves of plan 33.

The Octavo

Fold 34 is sometimes designated as the "saddle-stitch" fold. A good hand fold.

Plan 35 is a transpositon laterally of the two vertical 8-page sections of plan 33.

Fold 35 is the Dexter machine 'newspaper' fold, and may be folded easily by hand.

The Octavo

Plan 37 is the 'broad 16' and is the basis for plans 38, 39, 40, all being 4-p. transpositions of 37.

Plan 36 is the third transposition of plan 33. Plans 33, 34, 35, 36 show all the variations of the oblong 16. The title page of this book shows these four plans in combination.

Machines for making a broad fold are not numerous and are always built 'to order.'

Plan 38 is a transposition of the upper and lower halves of 37. Notice its variation from 34.

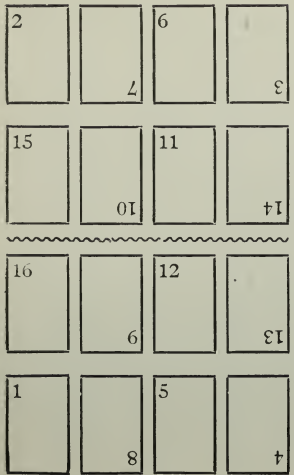
37 is the broad hand fold, two parallel, one right angle, and is easily managed in binding.

Plan 40 is a vertical transposition of the upper and lower 8-p. sections of plan 39.

Fold 39 is similar to fold 37—two parallel, one right angle. Hand fold, or 'special' machine

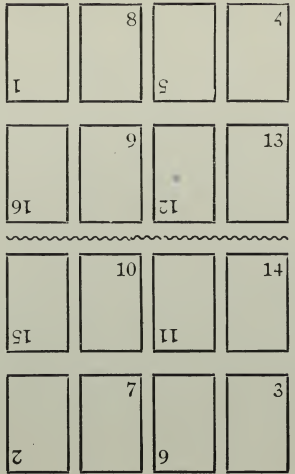
Plan 39 is a lateral transposition of the two vertical 8-page sections of plan 37.

41—PLAN—W. & T. OR S.-W.



Plan 41 is the "legal" way—the usual backs being the trim margins—backs at the heads.

41—FOLD

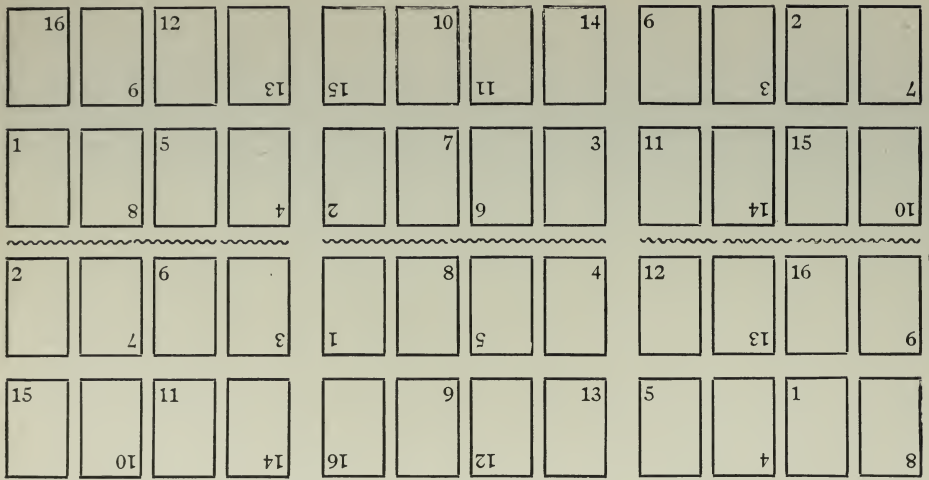


Fold 41 has two parallel, one right angle, producing a book that opens from you.

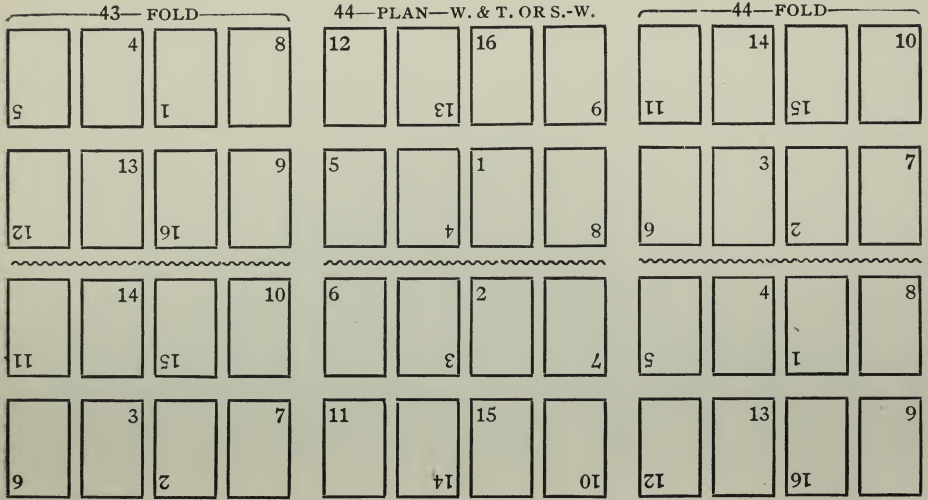
40—FOLD

Folds 37, 38, 39, 40 are practically the same—two parallel, one right angle—3 folds.

The Octavo



Plan 42 is a vertical transposition of the upper and lower 8-page sections of plan 41, and 43 is a lateral transposition of the two vertical 8-page sections of plan 41. Plans 41, 42, 43. 44 show the four different ways of making up a 'straight' oblong 16 the Legal way.



Folds 43 and 44 are similar to 41 and 42—two parallel and one right angle. Plan 44 is a vertical transposition of the upper and lower halves of plan 43. These plans for 16-page forms the 'legal' way are not shown in any other book on the subject of stonework.

The Octavo in Folio and Quarto Form

45—PLAN—W. & T. OR S.-W.

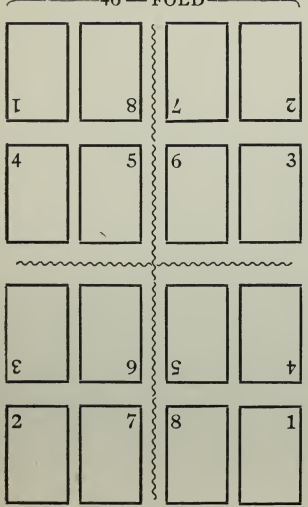
Plan 45 is for covers and jobs '4-on' to reduce presswork.

45 — FOLD

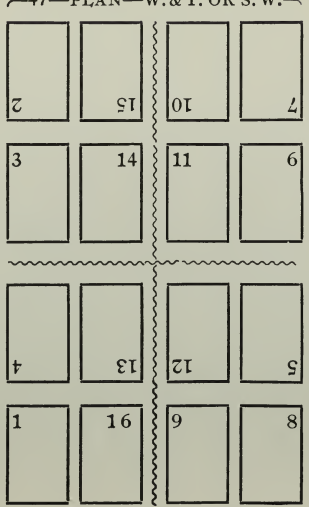
Fold 45 is 'two-on' for 1-sheet or 8 4-p. sheets—each one fold

46—PLAN—W. & T. OR S. W.—

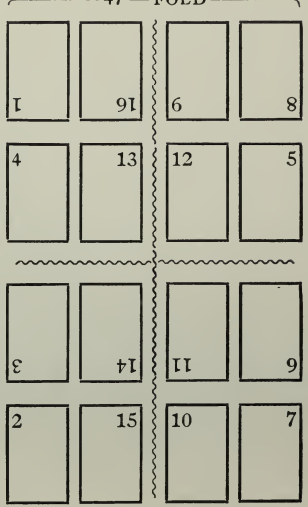
Plan 46 is for a form of two separate 8's printed as one form.



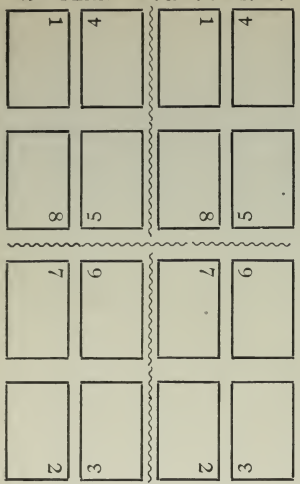
Fold 46 is the common 2 folds for each 8-page quarter sheet.



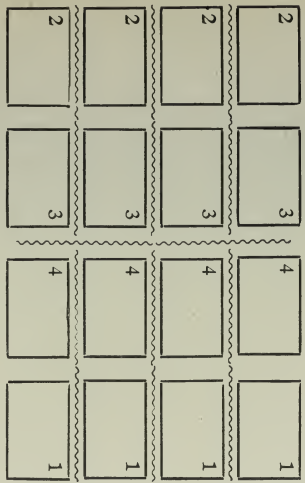
Plan 47 is a 16-p., 8 inserted in 8. May be transposed 3 ways.



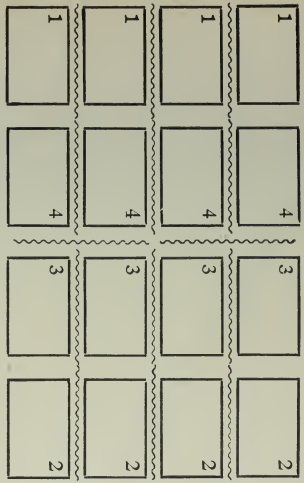
Fold 47 is two quarter sheets of 8 pp., one inserted in the other.



Plan 49 is for two separate 8's the broad way. The two vertical 8-pp. may be transposed.



Fold 48 may be folded '4-on' in the half-sheet or as 8 4-p. sheets, one fold to each 4 pp.



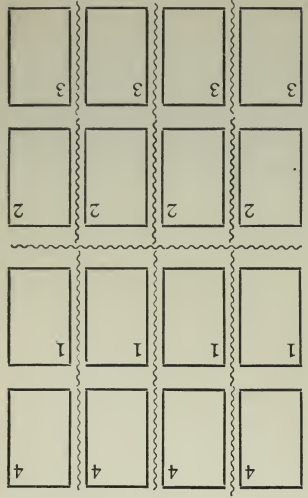
Plan 48 is a 4-p. '4-on,' broad way, for covers or heavy stock. Saves presswork on long runs.

Fold 50 is two quarter sheets of 8 pp., one inserted in the other; for heavy stock.

Plan 50 is a 16-p., 8 inserted in 8. May be transposed 3 ways, somewhat like plans 38, 39, 40

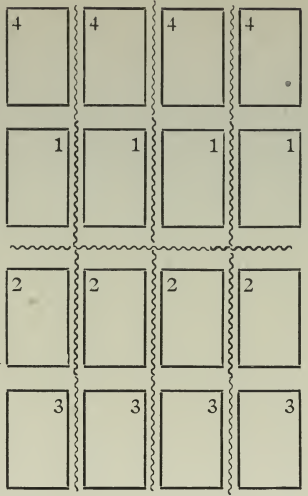
Fold 49 is the common broad 2 folds for each 8-page quarter sheet after cutting.

51—PLAN—W. & T. OR S.-W.



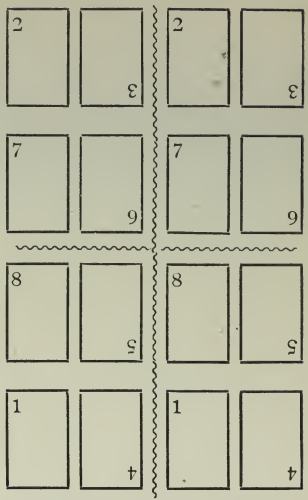
Plan 51 is a 4-p. '4-on,' legal way, for covers or heavy stock

51—FOLD



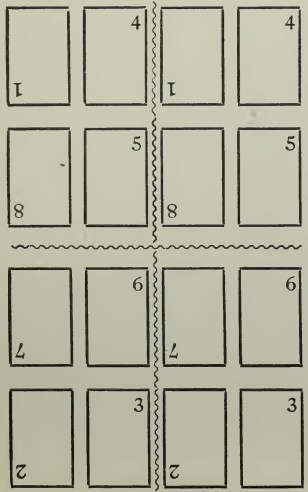
Fold 51 may be folded '4-on' in ½ sheet or as 8 4-p. sheets.

52—PLAN—W. & T. OR S.-W.



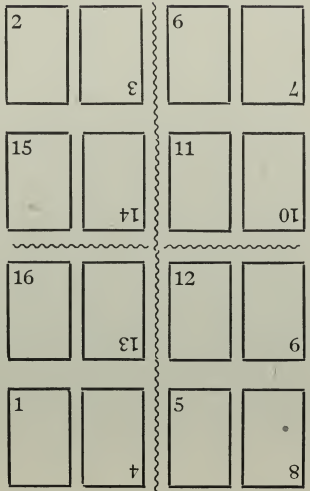
Plan 52 is for a form of two separate 8's printed as one form.

52—FOLD



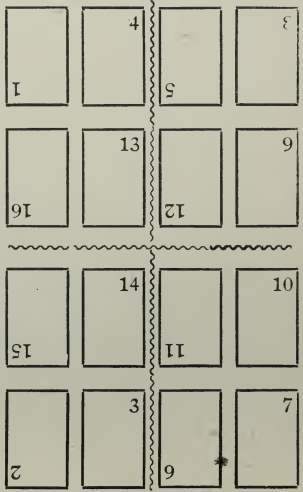
Fold 52 is two right-angle folds each of the four quarter sheets

53—PLAN—W. & T. OR S.-W.



Plan 53 is for a form of two 8's, one to be inserted in the other.

53—FOLD



Fold 53 is made in two right-angle folds of each $\frac{1}{4}$-sheet.

The Fold

The manner in which the sheet will be folded must be known to the stoneman before the form is imposed. Many hand-fold impositions cannot be folded on machine, but all machine-fold impositions may be folded by hand. It is necessary, however, to cut the sheets printed from complex and inset machine-fold forms into their several subdivisions before folding by hand.

Take a large size sheet of paper, fold it in half, then fold this sheet exactly as the work is to be folded when printed; cut the folds at the upper right-hand corner (the folio corner), mark 1 and write the word "fold" on the outside of first leaf; inside of first leaf mark 1, outside of second leaf mark 2, inside of it 2, and continue to write and duplicate the numbers on each leaf to the end. Open the whole sheet, and on the side containing the first page with the word "fold" will be the lay of the pages on the printed sheet. Turn the sheet over, and it shows exactly the way the pages should lie in the form to produce the fold shown on the first side. This is a most effective way to develop the "plan" when the "fold" is known, and applies to both hand and machine folds.

The "fold," in all cases where shown in this book, indicates the position of the pages on the two sides of the printed paper. It must be mentally "seen" by the student that the half of the "fold" diagrams containing the initial page will be the under side of the paper when it is in position to be folded. This "fold" is so placed in reference to its plan that it clearly shows the direction in which the sheet is turned on the press for perfecting, and makes plain the relation of the plan and the fold.

Machines for folding railway folders are in the "special" class and only the very large "railroad" printing offices use them.

The broad or "music" fold machine is also in the special class, though there are many of them in use. Plan 81½ shows the layout and the fold for a Dexter

double 16 "broad" folder. The two 16's are cut apart after the sewing, making two 16-page signatures.

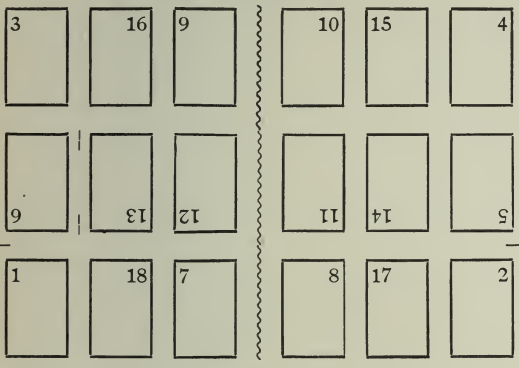
Points for point folding machines should be set so they will punch through the paper. The points should be placed in the outside section only of a sheetwise form, and in the outside half of a work and turn form, to remain during the entire process. If there is more than one signature in the form, each should contain the points, placed as noted above. If these points are properly placed they insure accurate folding of the printed surfaces, even if the sheets are not accurately fed into the press.

Slits for automatic pointing insure accurate register on Dexter folding machine; in some shops they are used on all Dexter machine-fold forms, in others only on forms the sheets from which are cut before or during the process of folding. The press-gripper edge and the press side-guide end of the paper are the gripper edge and the side-guide end for the folder in most cases. However, if sheet is cut in a way to produce a section whose gripper and end-guide edges are not at right angles, then points or slits are necessary for accurate register in folding. The 1¼″ slit is used on the Quad. 16 and Double 32 Book Folder, placed in center of "inside" extending at right angles with line of first fold. The two ⅝″ slits are used in all standard Dexter folders. These slits are not shown in the Dexter folder plans in this book because in some cases there is not space for them. The attachment for automatic pointing is adjustable, so that slits may be wide apart or close together, according to the size of stock. They must be "made ready" to punch through the paper in all cases. The face or base of two-point brass rule may be used. Consult the folder-man or pressman when in doubt on questions concerning points, slits, gripper edges, first fold, gauge edges, etc.

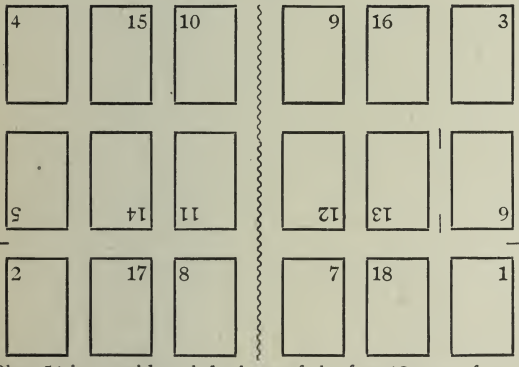
In hand folding, say of a 16-page signature, if the second fold is cut through slightly more than half its length with a knife or other sharp instrument, it is possible to fold a sheet of very heavy stock without buckling. This method may be applied to sheets of any other number of pages, and will often obviate the necessity for dividing the form into small sections.

Eighteen Pages

54—PLAN—W. & T. OR S.-W.



54—FOLD

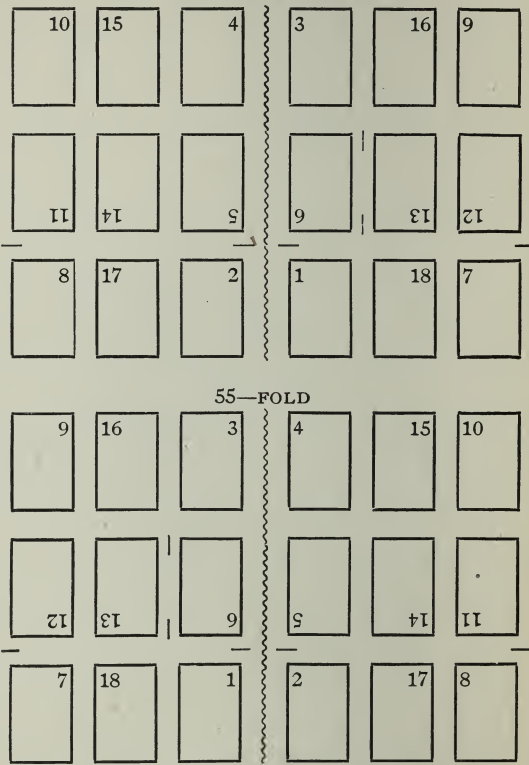


Plan 54 is considered the best of the few 18-page forms but can be used for side-stitched work only.

The fold is the half-sheet without cutting, and with carefully-arranged margins is easily folded to register.

Eighteen Pages

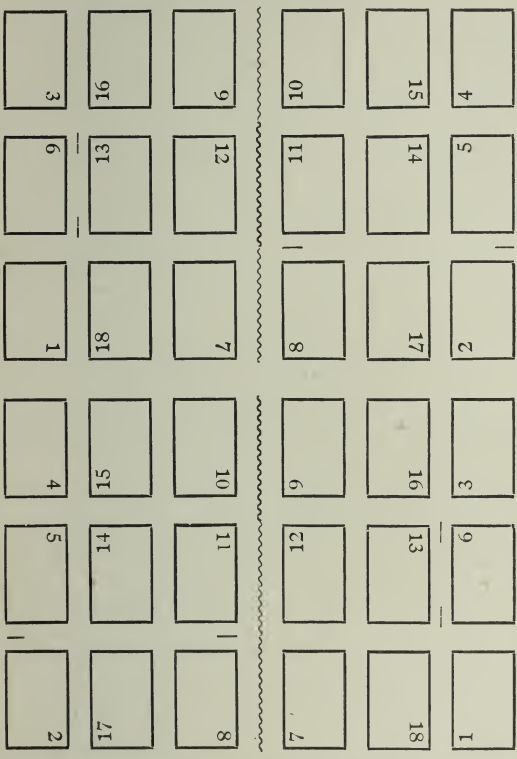
55—PLAN—W. & T. OR S.-W.



55—FOLD

Plan 55 is a lateral transposition of the two vertical 9-page sections of plan 54, thus bringing the low folios to the inside of the form. Fold 55 is the same as fold 54 --four--two long and two narrow way of pp.

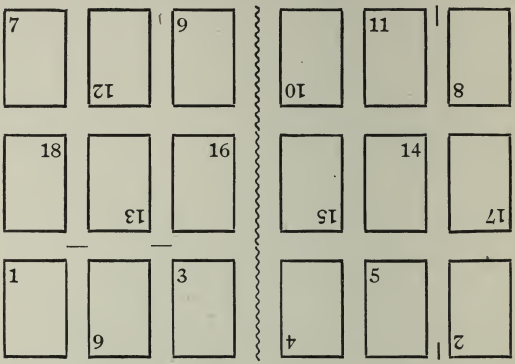
Eighteen Pages



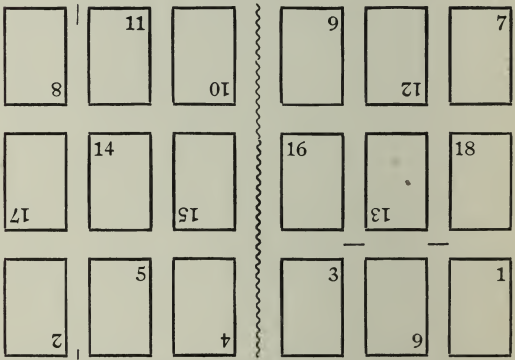
Plan 56 is an 18-page form the broad way. The upper and lower 9-p. sections may be transposed vertically, or swung around side by side if the shape of the stock permits. The fold, 56, is two parallel the width of the pages and two parallel the depth of the pages. Side S.

Eighteen Pages

57—PLAN—W. & T. OR S.-W.



57—FOLD



Plan 57 is the 'legal' way for 18 pages, side stitch, and the two vertical 9-p. sections may be transposed laterally, like plans 54-55. The fold is, two parallel the long way and two parallel the narrow way of the pages

Margins

The margins of a page should be decided upon by those for whom the book is to be made.

The margins of a book page should be apportioned from the paper that will be visible after it has been bound.

Attention to the making of margins should be in proportion to the character, value and permanency of the work.

The stoneman should know the style of binding for the printed work—whether sewed tight or loose back, saddle stitched, or side stitched.

If margins are to be unequal, the form is first made up for equal margins, and then the proper amount of furniture is transposed to produce the desired result.

The "making of margins" is simply the proper placing of the type on the paper page. Each different class of paged work may be "margined" in a different manner.

The position of the type page on the paper page should be determined by the author or publisher, but if he does not decide, it is up to the stoneman to know how it should be done.

Authorities on the subject of book margins do not entirely agree on some points, but among the best makers of good books the custom is to make the margins in the proportions shown in diagram "A," page 61.

As each pair of pages—an odd and an even page—must be treated as though they were one in determining the margins, it may be assumed for the purpose of illustration that the pair of pages represents a city block—the back margin representing the alley dividing the block in half, the two type pages representing the lots, and the trim margins representing half the width of the four streets surrounding the block.

BACK MARGIN

The back margin should be two-fifths of the space remaining after deducting the width of the type page

from the paper page, and the front margin should be three-fifths of this remaining space, if the work is saddle-stitched or sewed loose-back. If bound tight-back or side-stitched, one-half the space to be allowed for concealment of paper in binding must be added to the two-fifths back margin. The foot margin should be wider than any of the others. The head margin from top of first line of type in a full-length page to edge of paper after trimming should be somewhat more than the visible back margin.

If the type used is large the margins should be large; if small, the margins may be small.

Wide margins on cheap work make it look cheaper. Narrow margins on fine work make it look cheap.

The flat-back book has very little concealment of paper, which permits the use of very small back margins.

The margins of the page in a well-made book depend upon the size and style of type, and if leaded or solid; the ink, the paper, and the binding.

The spring-back, sewed book should have an allowance in the back margin of at least 6 points for concealment of paper in binding; if stiff back, 18 points.

Publications, magazines, catalogues, guides, directories and cheap books the type pages of which are crowded, are sometimes given equal margins all around.

If page is wide or long, or both, let it project into the head, foot and front margins, and into the back margin only when necessary to prevent a too-narrow front margin.

It is the rule in some shops to determine the back margin of a pair of pages by allowing one pica in the back for each inch of the length to which the pages are to be trimmed.

Saddle-stitched magazines, booklets and publications need no allowance for concealment of paper in binding, unless they contain more than 32 pages. The most effective method of securing proper margins for saddle-stitch work is to make a "dummy" of the stock to be used as it will be in the finished job, place proof of full-size page on first page in the required position and with a sharp knife make two cuts through the entire job near the corners on each side and each end of the print, holding the blade parallel

and flush with edges of proof. These cuts serve as reliable guides in making the margins.

The concealment in wire side-stitching is 12 to 18 points if there are 6 16's, and the more sections the more concealment.

If pages are uniform in size, all the back margins should be the same width, and all the head margins the same width in side-stitched or loose-back work, because no variation of paper can affect these two margins. Papers vary from ⅛" up in length or width or both, according to quality. The best book and flat papers are nearly always true to "mill" size, but the cheaper grades of book, news and catalogue papers require some allowance for possible variation in size, if the work is to "trim out" in good order.

Loose-back sewed books require only such back margin as would be proper for a saddle-stitched work of same size paper-and-type page. Tight-back sewed books require at least one-eighth inch more than what we may call the normal (saddle-stitch) back margin.

Side-stitched work requires from 12 to 18 points extra space in back margin—that is, if 6 picas back margin are required for a saddle-stitched work, the same work side-stitched would require a back margin of 7 to 7½ picas.

If the stoneman is doing work on printed matter that, by its very nature, is destined to be cast aside in a short time, the margins may as well be equal or very nearly equal all round. If the work is of a permanent value, the margins should be allotted with more care.

The folded paper at foot of pages is always uneven before it is trimmed, no matter by what method it has been folded, and this necessitates a greater trim. In hand-folding, the folio figures (page numbers) are guides, and the effort is to register the outside edges of pages at the heads.

A sewed book is thicker at the back than at the front because of the folds of the sheets, consequently books of many sections (usually those of more than six 16's), are made with rounded backs, in order that the folds may lie in such a position as to reduce this thickness by overhanging the folded edges.

The shape and number of pages to be printed in the form and the size of the paper determine the position

of the type pages on the printed sheet. The back margin is determined by the width of the type page, the width of the paper page in the trimmed work, and the allowance (if any) for concealment of paper in the binding; the head margin is determined by the width of back margin plus the head trim; the front margin must be equal to or wider than the visible back margin with enough added to allow for reasonable trim and yet leave the page the width required by the specifications of the job ticket. The foot margin must be wide enough to allow for more trim than any other margin; must be wider than any other after the trim, and must leave the page the length required by the specifications.

BACK TITLE

The "backbone" of a flat-back book—the lettering on the outside of the back—should be set to read up, according to the makeup rule that broadside pages of illustrations, tables, etc., shall read up. Investigation shows that "backbones" are made to read down because booksellers want them that way. When such books are placed in a bookcase the back title does not "read right" to a printer. The backbone shown in plan 9 is made to read down—but in the correct way.

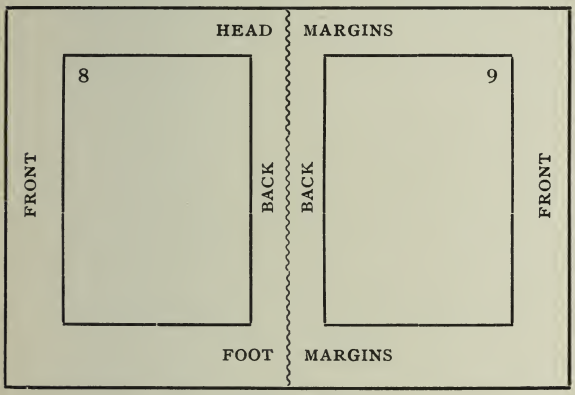
Print and deckle edge papers require most margin for trim; smooth paper very little for trim—from a pica up, according to the number of pages in a signature; but the forms for all books that are to be trimmed after binding must be made up with sufficient allowance for trimming at head, foot and side of page, except that in "Legal" forms this allowance is at the sides and foot of page. If side-stitched, the head trim should equal the concealment in back. If running title is short, or has only the page number, the head margin (the space above top line of body of page) may be the same as the back; if running title is a full or nearly full line, allow 9 to 12 points for trim.

ALLOWANCE FOR TRIM

The "allowance for trim" is whatever margin remains after the pages have been allotted the back, front, head and foot margins necessary to bring the printed and trimmed page into the correct position in the finished work. This allowance varies so greatly that it

is not possible to say what it should be, even in a general way. The trimmed-page marginal proportions should be,—back, 4 picas; head, 6 picas; front, 8 picas; foot, 10 picas. If this proportion can be secured and still allow the work to be trimmed to the specified finished size, then all the remainder of the paper would be "allowance for trim." It may be said, however, that it is usually necessary to allow from 12 to 18 points for trim, even if the work is thereby made under size.

DIAGRAM "A"—TWO-PAGE MARGINS



GRIPPER EDGES

PLAN	TUMBLE AND S-W														
4	1	4	3	2	2	1	2	8	9	6					
5	1	4	3	2	5	4	2	2	1	2	8	9	14		
22	6	1	1	2	2	1	2	2	1	1	2	9	19	1	27
24	3	1	3	4	2	2	1	2	1	1	2	9	20	1	28
26	1	1	2	1	2	2	1	2	1	1	2	9	20	1	28
32	1	2	1	2	2	2	1	2	1	1	2	9	20	1	28
45	1	2	1	2	2	2	1	2	1	1	2	9	20	1	28
46	2	1	1	2	2	2	1	2	1	1	2	9	20	1	28
58	7	1	1	2	2	2	1	2	1	1	2	9	20	1	28
59	10	1	1	2	2	2	1	2	1	1	2	9	20	1	28
60	5	20	1	2	2	2	1	2	1	1	2	9	20	1	28
61	13	1	2	2	2	2	1	2	1	1	2	9	20	1	28
83	28	1	2	2	2	2	1	2	1	1	2	9	20	1	28

Second and third cols. show gripper edges for the tumble forms; if the form and paper are of suitable shape for S-W, the second and third are gripper edges for outside, and fourth and fifth for inside. Each plan may be printed W. and T. if form and papor are of suitable shape.

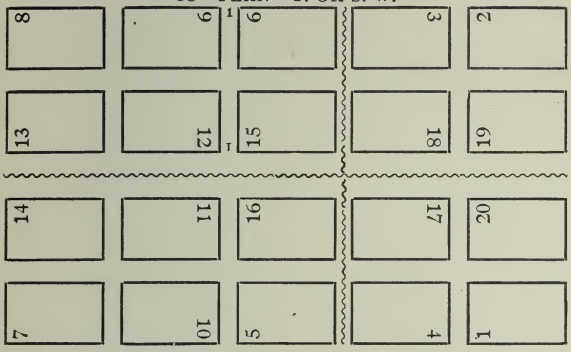
The figures opposite each plan number in the Table of Gripper Edges, page 62, indicate the pages which lie at the gripper edge of the form or half section of form in 80 of the 100 plans in this book.

Gripper Edges

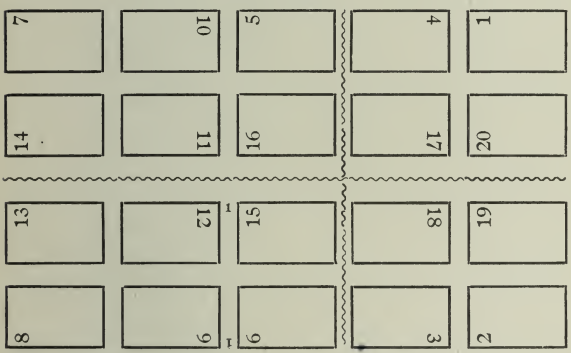
PLAN	W & T		SHEETWISE OUTSIDE		SHEETWISE INSIDE	
1	2	1	1	4	3	2
2	he'ds		1	4	3	2
6	3	4	4	1	2	3
7	2	1	1	20	19	2
8	2	1	1	1	2	2
9	2	1	1	52	51	2
10	1	2	4	1	2	3
11	7	8	8	5	6	7
12	2	1	1	8	7	2
13	4	3	3	6	5	4
14	1	2	8	1	2	7
15	3	4	6	3	4	5
23	2	1	1	12	11	2
25	3	4	10	3	4	9
27	1	2	12	1	2	11
28	2	1	1	3	4	2
29	12	11	10	12	11	9
30	1	2	12	1	2	11
31	4	3	3	10	9	4
33	2	1	1	4	3	2
34	8	7	5	8	7	6
35	16	15	13	16	15	14
36	12	11	9	12	11	10
37	1	2	4	1	2	3
38	5	6	8	5	6	7
39	15	16	16	13	14	15
40	11	12	12	9	10	11
41	2	1	1	4	3	2
42	16	15	13	16	15	14
43	6	5	5	8	7	6
44	12	11	9	12	11	10
47	2	1	1	8	7	2
48	1	2	1	1	2	2
49	1	2	4	1	2	3
50	1	2	8	1	2	7
51	3	4	4	4	3	3
52	2	1	1	4	3	2
53	2	1	1	8	7	2
54	1	2	3	1	2	4
55	8	7	7	9	10	8
56	2	1	1	3	4	2
57	1	2	7	1	2	8
62	2	1	1	18	17	2
63	1	2	3	1	2	4
64	1	2	3	1	2	4
65	2	1	1	22	21	2
66	11	12	12	4	3	11
67	15	16	16	20	19	15
68	2	1	1	16	15	2
69	1	2	12	1	2	11
70	2	1	1	4	3	2
71	1	2	12	1	2	11
72	1	2	4	1	2	3
73	23	24	24	1	2	23
74	15	16	16	1	2	15
75	15	16	16	13	14	15
76	23	24	24	21	22	23
77	9	10	12	9	10	11
78	7	8	8	1	2	7
79	17	18	20	17	18	19
80	27	28	28	17	18	27
81	1	2	4	1	2	3
81½	18	17	17	20	19	18
82	2	1	1	20	19	2
84	2	1	1	34	33	2
85	37	38	24	37	38	23
86	40	39	25	40	39	26
87	12	11	21	12	11	22
88	2	1	1	4	3	2
89	44	43	13	44	43	14
90	50	49	49	16	15	50
91	2	1	1	41	42	2
92	2	1	1	16	15	2
93	42	41	41	24	23	42
94	9	10	16	9	10	15
95	7	8	8	5	6	7
96	15	16	16	13	14	15
97	10	9	5	20	19	10
98	10	9	9	12	11	10
99	18	17	17	20	19	18

Twenty Oblong Pages

58—PLAN—T. OR S.-W.



58—FOLD

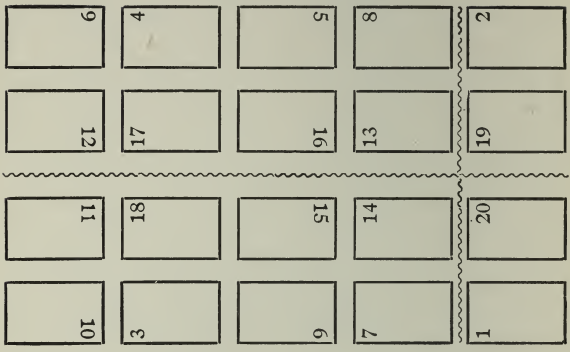


Plan 58 is a form of 20 pages made up to print as a 12 and an 8. The two vertical 10-page sections can be transposed laterally, making it a '20 imposed from the center,' the 8 being similar to plan 10 and the 12 being plan 24.

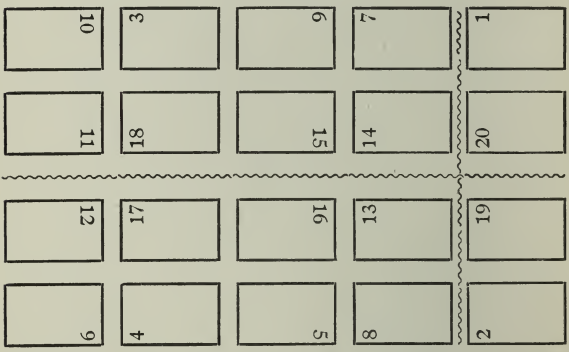
Fold 58 is, the common right angle two folds for the 8 and two parallel the length and a right angle the width of the pages for the 12; 12 inserted in 8, saddle stitch.

Twenty Oblong Pages

59—PLAN—T. OR S.-W.



59—FOLD

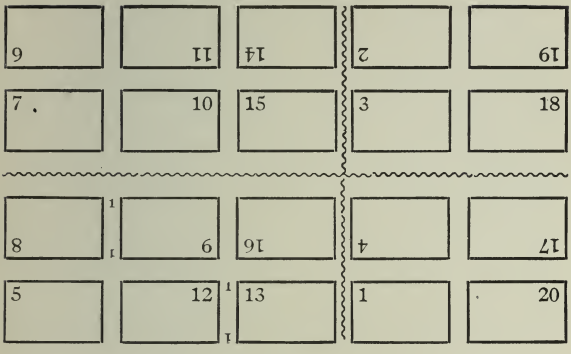


Plan 59 is a form of legal 20's made up to print as a 16 and a 4. The two vertical 10-page sections can be transposed laterally, making it a '20 imposed from the center,' the 4 being similar to plan 2 and the 16 somewhat like plan 34.

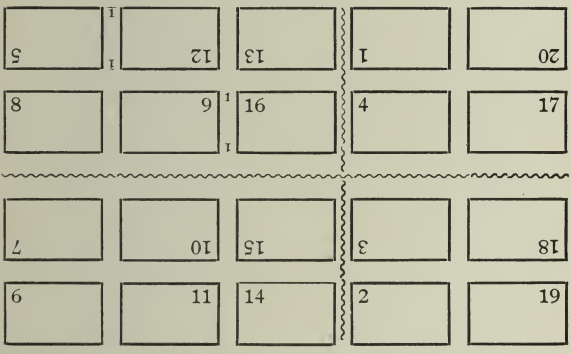
Fold 59 is, the common one fold for the 4; three folds for the 16, two parallel the long way of the pages and one the narrow way. Insert 16 in 4; saddle stitch.

Twenty Broad Pages

60—PLAN—T. OR S.-W.



60—FOLD

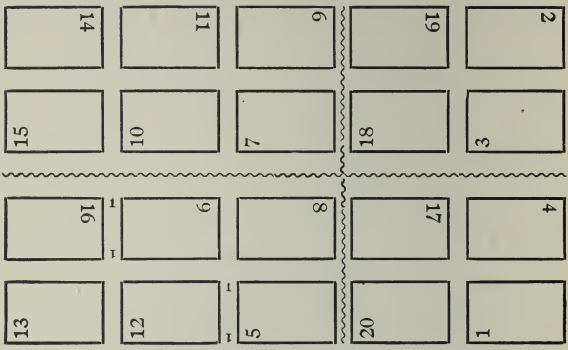


Plan 60 is a 20-page form the "broad way," and is a combination of 8 pages and a 12-page insert. This form may be 'made up' from the center by a vertical transposition of the upper and lower 10 page sections.

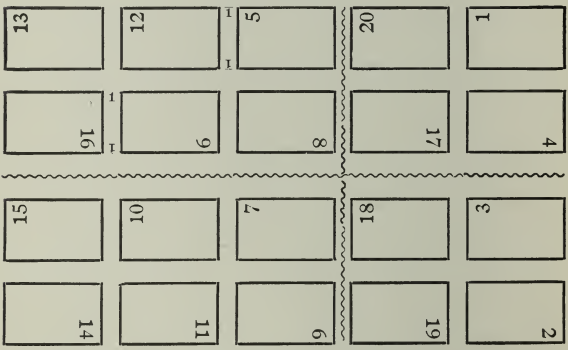
Fold 60 is the common two folds for the 8 pp.; for the 12 pp., first the long way of the sheet, then fold p. 8 over 9, tumble sheet and fold p. 13 over 12. Side stitch.

Twenty 'Legal' Pages

61—PLAN—T. OR S.-W.



61—FOLD



Plan 61 is a form of legal 20's made up to print as a 12 and an 8. The two vertical 10-page sections can be transposed laterally, making it a '20 imposed from the center,' the 8 being similar to plan 14 and the 12 somewhat like plan 28.

Fold 61 is, the common right angle two folds for the 8; for the 12, first the long way of the sheet, then fold p. 8 over 9, tumble sheet and fold p. 13 over 12. Side stitch.

Plans

The plans in this book are arranged in such a manner that the lowest odd page—the initial page—will be at the left hand of its mate when viewed from the foot of page and foot of form, except the lower half of plan 91, described under "The Leaf," page 31.

The first diagram of each series is a common hand-fold form. These common forms are shown in this connection in order that the student may readily understand the various transpositions that follow. Several diagrams for folding machines are shown. The plans that show combinations of two different folding machine forms are presented for the purpose of showing their similarity and their difference. A careful study of the plans for folding machines will show that they are as simple as any of the so-called hand-fold forms, and whatever peculiarities they may have are soon learned by the stoneman.

In most cases it is not possible to use what are generally called common forms (forms in which the initial page is in the lower left-hand corner) for folding machines, but these common forms furnish a starting point in the building of forms that is easily understood, because they are more or less familiar to printers, and the plans for folding machines are either the common forms, or transpositions of their sections. For this reason a thorough knowledge of the positions of pages in forms in which the initial page is at the lower left-hand corner gives the stoneman a master key to the imposition of all forms. The hand-fold forms are not always the best for hand fold, nor are machine folds always the best for hand fold, but every "possible" fold can be folded by hand. The common forms are the foundation upon which all other plans of imposition are based. Some stonemen imagine they can learn nothing from a study of the "common" forms, but as a matter of fact a thorough knowledge of them is the best basis for a quick and accurate understanding of all the possibilities of machine-fold imposition. Their use as

a starting point for each series of plans shows clearly the "evolution" of imposition.

Memorize the positions of pages in all the common forms of 8, 12, 16, 20, 24 and 32 pages; study the transposition possibilities of each of these forms; fill out the printed diagrams with the forms you are making up, or have made up; keep a record of your daily experience as a stoneman; study the subject as a science and practice will make perfect. If composing room, pressroom and bindery are operated in harmony, no form need be sent to press that is not all right and just right. Familiarity with the "lay" of the common forms makes easy the work of shifting their sections to produce other styles of forms. This shifting or transposition of sections constitutes the "mystery" of stonework, and when understood thoroughly is an accomplishment of which one may well be proud. It is a fascinating study and a profitable line of work for printers who are "quick at figures."

THE "WAVE" RULE

Each and every diagram in this book contains a "wave" rule running through the center, either the long or the narrow way, which separates the form into two equal parts ("outside" and "inside"), and is the dividing line if the form is to be printed sheetwise—the press gripper edge being at the outer ends of form (or sides, if tumble) and parallel with this rule; if the whole form is to be printed (work and turn or tumble), the paper is turned, or tumbled, as the case may be, across this central rule in the process of perfecting, the gripper edge being at right angles to it, and it indicates where the cut is to be made, either on press or cutter, in separating the two duplicate half sheets; this rule also indicates, in the multiple forms, the several divisions into which the printed sheet or half sheet is to be separated by slitters either on press or folding machine, or cut apart on paper cutter. In plan 94 this wave rule is not shown, as the two pages show the two equal divisions.

DEXTER FOLDING MACHINES

Plans for the four standard Dexter Folding Machines are given in this book, either singly or in combination.

The Dexter company manufactures a combined feeding, folding, covering and wire-stitching machine with a range of 16 to 52 pages in multiples of four pages. This company also manufactures special machines for special folds.

Plan 73 is a 32-page form composed of two continuous 16-page signatures, printed sheet cut in half on folder after first fold; plan 74 is two continuous 16's cut after first fold and inserted; plan 78 is two duplicate 16's, cut after the first fold (this form is similar in style to 73, but the pages are the same in each 16 of 78) and is useful in printing 16 pages of two different jobs in one form; plan 89 is two signatures of continuous 32's, cut after first fold; plan 94 is a combination, the upper half extending across the two pages, being two signatures of duplicate 32's. The foregoing plans are for the double 16 and double 32 Book Folder.

Plan 35 is for 16 pages "newspaper" makeup, slit in half on press or cut on cutter if printed work and turn; plan 76 is a straight 32-page; 79 is also a straight 32, being merely a transposition of the vertical 8-page sections of 76; plan 11, and pages 1, 2, 3, 4, 29, 30, 31, 32, of plan 80, show transpositions of plan 10; the main section of plan 85, 16 pages; left vertical half of plan 86 is an unusual but effective arrangement of the two halves of the 24 pages (if these halves were side by side in this double form the sheet would need to be "tumbled," a method that must be avoided when possible); the lower half of plan 91; plan 95, parallel 16 pages two on; plan 97, parallel 24 pages two on; plan 98, parallel 32 pages two on. Foregoing plans are for the Newspaper and Periodical Folder.

Plan 90, made up of four vertical continuous 16's, starting at the initials 1, 17, 33, 49, half sheet to fold, cut on folder after first fold; plan 92, similar in style to plan 90, with two 8's in middle; plan 93, two continuous signatures of 32 pages, each signature being two 16's inserted (first 32, 1 to 8, 25 to 32 and 9 to 24, second 33 to 40, 57 to 64 and 41 to 56); plan 94 (lower half) across two pages, two signatures of duplicate 32's. For Quad. 16 and double 32 Book Folder.

Plan 11, 8 pages; plan 33, 16 pages; plan 75, 32 pages; plan 77, 32 pages; plan 80, four 8-page sections inserted (to be cut apart before folding); upper half of

plan 91; plan 93, two 16's, 65 to 80 and 81 to 96, middle of plan; plan 96, 16 pages two on; plan 99, 32 pages two on. The foregoing plans are for the Single Marginal Book Folder.

CHAMBERS FOLDING MACHINE

The Chambers company makes book folders for 8's, 12's, 16's, 24's, 32's, double and quadruple 16's and double 32's, and a great variety of special machines. This company's point machines are in general use and are familiar to most stonemen.

A lateral transposition of the two vertical halves of plan 73 will give the imposition for the Chambers double 16 point machine; points 7½ inches each side of center of first fold, in head margin between pages 1, 4, 13, 16, and 5, 8, 9, 12.

Plan 78 is both Dexter and Chambers double 16; plan 90, with the four vertical 16's transposed laterally so that the initials and their "mates" will read 1-16, 17-32, 33-48, 49-64, becomes a Chambers Quad. 16; upper half of plan 94 is also for Chambers Double 32 Drop-Roller machine; plan 74 is both Dexter and Chambers Double 16 inserted and delivered as a 32-p. signature; plan 77, Chambers straight 32; the Chambers double 12 is plan 69 with the row of pages containing 7-18, 19-6 turned half 'round, with head of 7 toward head of 2, 18 at 23, 19 at 22, 6 at 3; and the row of pages containing pp. 5-20, 17-8 turned half 'round with heads toward heads of pp. 4, 21, 24, 1. This fold produces a signature consisting of a 16-page main section and an 8-page insert section with open heads. Not a good fold from a binder's standpoint. Plan 34 is also for the Chambers 16-p. folder; the double 16 sheetwise is also similar to plan 34, half of the "outside" and half of the "inside" being worked together in each of the two sheetwise 16-p. sections. Two such sections worked as one form would become a tumble form.

For octavo work the points are placed in the "outside" half, center of first fold; for sextodecimo work, in the half of the outside containing the initial page; for octodecimo work, in the one-third section containing the initial page, 20″ apart, 5″ and 15″ from first fold. For machine No. 88 the space from center to center of points is 15″; for No. 87, 11″.

PRACTICAL INITIAL POSITIONS

The positions of "practical" initial pages are given up to and including 64 pages, though as a matter of fact few forms are now made up containing sections of more than 32 pages. Machines will fold a 64-page sheet in two 32's, but a continuous form or section of more than 32 pages cannot be folded accurately either by hand or machine.

All the practical first-page positions for these eleven plans are as follows:

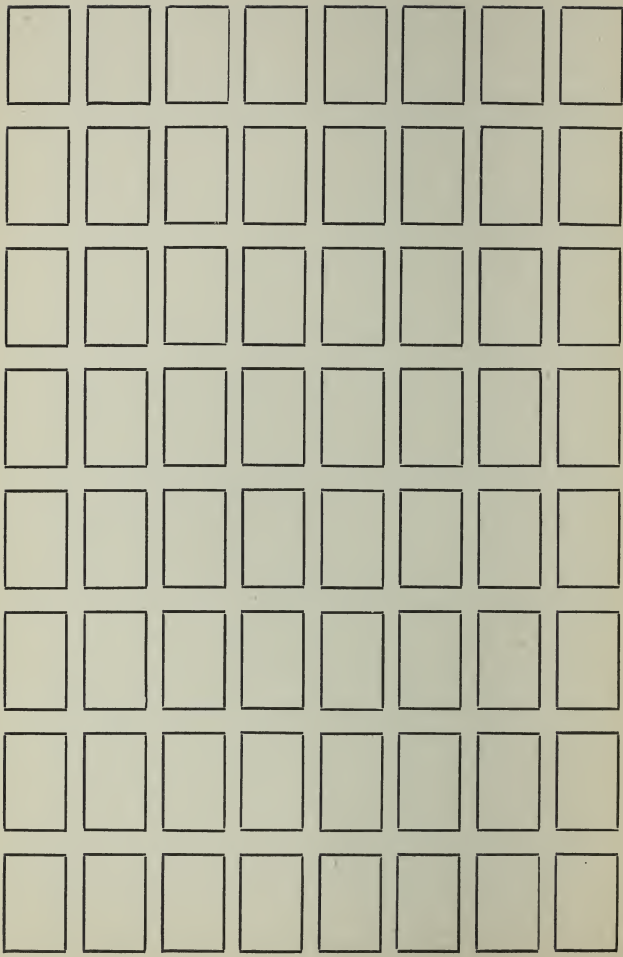
Plan	The initial page may occupy the position of	Plan
88	1 7 11 13 19 21 25 31 35 37 41 47 49 55 59 61	
86	1 3 11 13 15 23 27 29 31 39 41 43 1 7 — 10	
85	1 3 9 15 25 31 37 39 1 11 — 24	
84	1 3 7 9 15 17 23 25 31 1 7 11 13 — 33	
72	1 7 11 13 19 21 25 31 1 7 17 — 54	
62	1 3 7 9 11 1 19 — 58	

The sheetwise sections of 12, 18, 20, 24, 36 and 40-p. forms are variable, for the reason that there are not four pages or a multiple of four pages in the length or the width of these forms.

"Patent" blocks are made in several styles. Mahogany blocks are made in sets, of several sizes, such as 6x9, 9x12, etc. Combination steel and combination type-metal sectional blocks may be made up in different sizes. Blocks are made also with picas marked on the surface, and others with extension hooks for wide or long pages. Grooved blocks are made of steel plates to fit the press and have diagonal parallel grooves in which the catches that hold the plates are shifted in making the adjustments for register.

The "gripper edges" given on pages 61 and 62 apply only to the forms in this book. Those given for the folding-machine forms do not all correspond with those actually required by the machine, as some of the combinations in the machine plans prevent a proper arrangement of gripper edges.

"Markers" are shown in forms and sections where the fold does not bring edges of paper together. Short two-point rules should be used for this purpose, and may be centered both ways between pages, or placed near outer edge, or in outer margin to be trimmed off in binding.



The Duodecimo, 12mo, 12°

62—PLAN—W. & T. OR S.-W. 62—FOLD

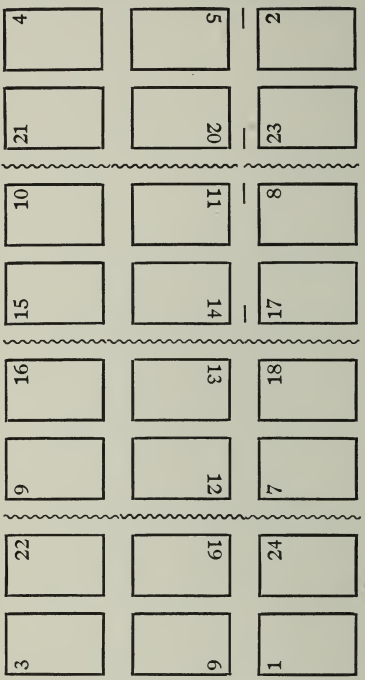
1 24 7 18 2 23 8 17
3 22 9 16 4 21 10 15
6 19 12 13 5 20 11 14
5 20 11 14 6 19 12 13
4 21 10 15 3 22 6 16
1 24 7 18 2 23 8 17

Plan 62 is a form of 24 pages made up of two vertical 12's, one to insert in the other. The plan may be transposed in five ways—by placing page 1 in the positions of 3, 5, 7, 9, 11; or the top half may be swung around, either to the right or left, alongside the lower half.

The fold is, two parallel lengthwise and a right angle the narrow way of the pages, for each quarter sheet.

The Duodecimo, 12mo, 12°

63—PLAN—W. & T. OR S.-W.

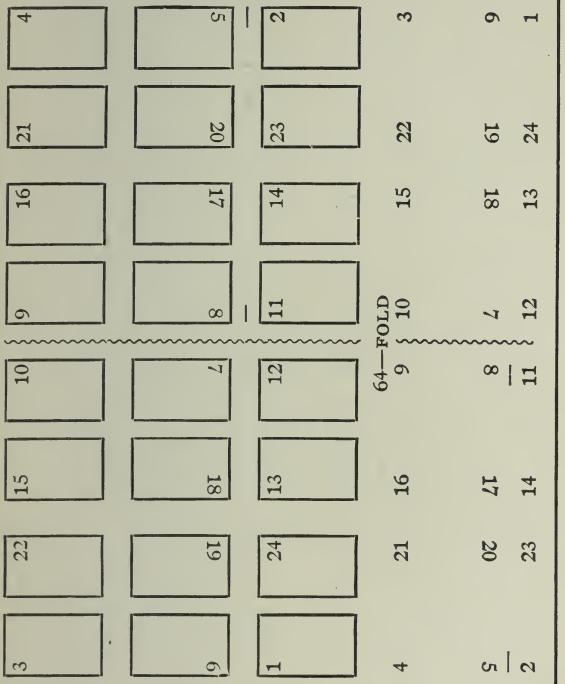


Plan 63 is a form of 24 pages made up of two lateral 12's, one to insert in the other. The plan may be transposed in five ways—by placing page 1 in the positions of pp. 7, 17, 23; or the right half may be moved a half turn to a vertical position above or below the left half.

The fold is, two parallel lengthwise and a right angle the narrow way of the pages, for each quarter sheet.

The Duodecimo, 12mo, 12°

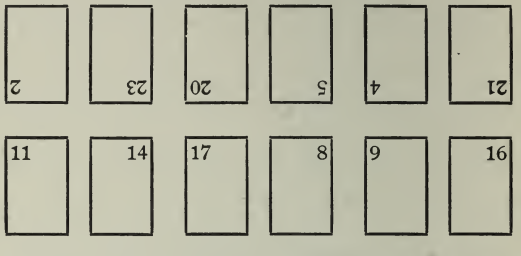
64—PLAN—W. & T. OR S.-W.



Plan 64 is a form of 24 continuous pages. Like other regular forms, this plan may be made up in as many (six) ways as there are 4-page sections in the form—by placing page 1 in the positions of p. 11, 13, 23; or the right half may be given a half turn above or below the left half. The fold is, two parallel the long way, two parallel narrow way of pp., for each ½ sheet; saddle S.

The Deep Duodecimo

65—PLAN—W. & T. OR S.-W.



65—FOLD

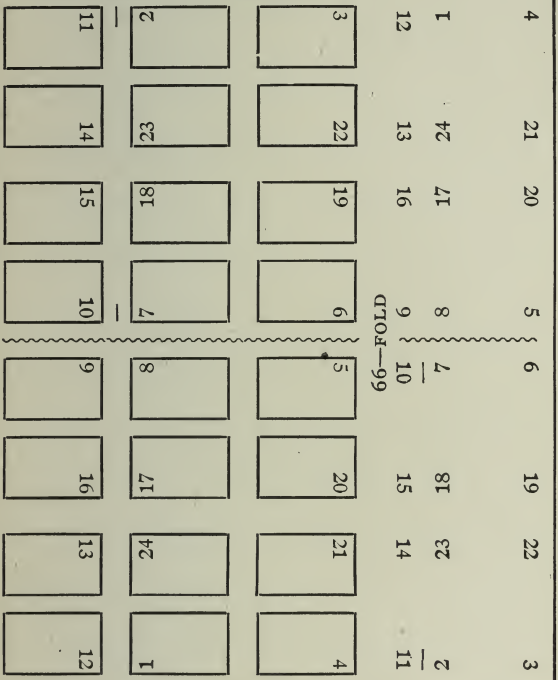
1	24	19	9	3	22
12	13	18	7	10	15
11	14	17	8	6	16
2	23	20	5	4	21

Plan 65 is a form of 24 deep pages; useful when pages are long and narrow, such as booklets, pamphlets, etc. May be transposed by starting with p.1 at 3, 9, 11, 17, 19.

Fold 65 is two parallel the narrow way, one the long way then one the narrow way of pages. Saddle stitch.

The Duodecimo

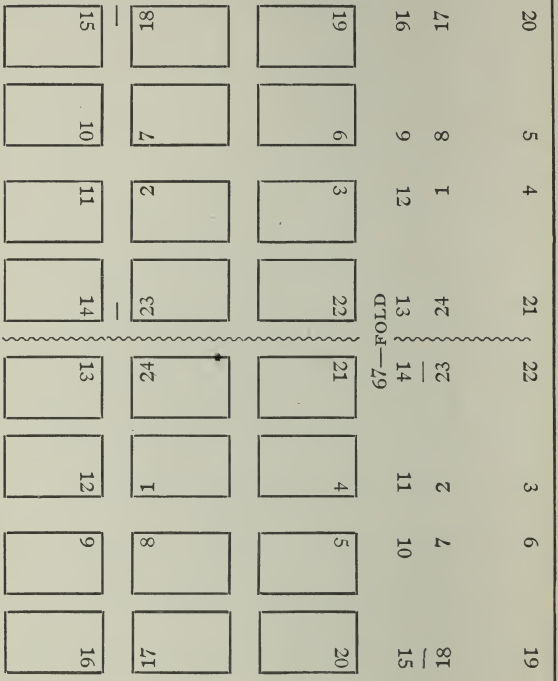
66—PLAN—W. & T. OR S.-W.



Plan 66 is a form of 24 continuous pages. This plan is sometimes called the French 24. The two lateral 12's may be transposed laterally, or either given a half turn to a position above or below the other. The fold is, p. 3 over 2, 5 over 4. 9 over 8, 13 over 12. A good hand-fold form. This plan is also used when the folding is to be done on a Dexter Single Marginal Book Folder.

The Duodecimo

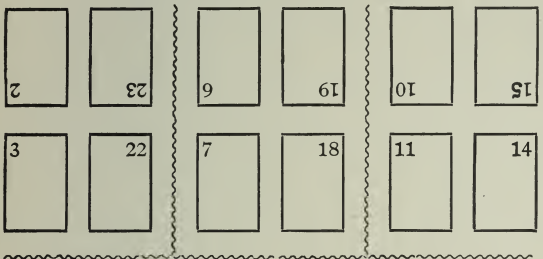
67—PLAN—W. & T. OR S.-W.



Plan 67 is a form of 24 continuous pages. This plan is a lateral transposition of the four vertical 6-p. sections of plan 66, placing the two inner 6-p. secs. of 66 at the outside and the two outer ones in the middle of form. This is the plan for the Dexter Newspaper and Periodical Folder. The fold is, 22 over 23, 20 over 21, 9 over 8, 13 over 12, for each half sheet. Saddle stitch.

The Duodecimo

68—PLAN—W. & T. OR S.-W.



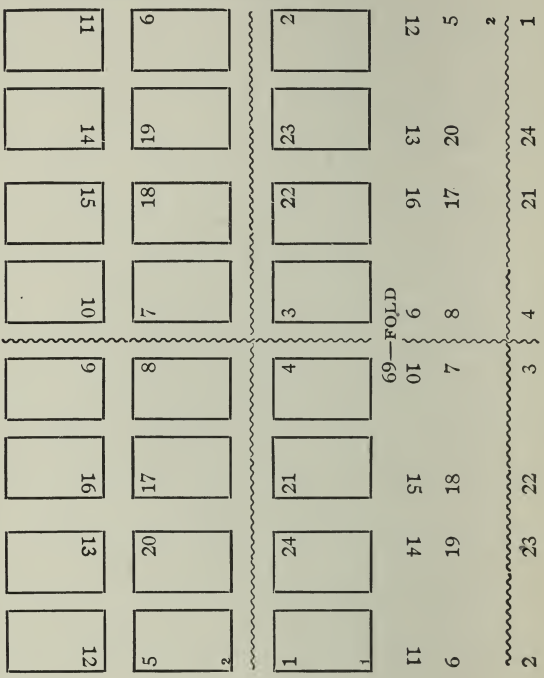
68—FOLD

1	24	5	20	6	16
4	21	8	17	12	13
3	22	7	18	11	14
2	23	6	19	10	15

Plan 68 is a form of 24's composed of three vertical 8's; useful for heavy stock and short runs. Upper and lower halves may be transposed vertically. Plans 63, 64, 66, 67 may be changed to 'long' 8's. Fold 68 is the common two folds for each 8-p. sheet; six 8-page sheets to fold; 3d 8 inserts in 2d and both insert in 1st 8. Saddle stitch.

The Duodecimo

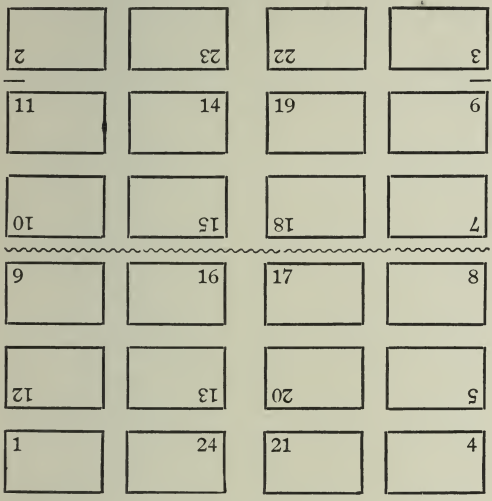
69—PLAN—W. & T. OR S.-W.



Plan 69 is a 24-page form consisting of an 8-page main section and a 16-page inset—a 'long' 8 and a 'long' 16. The two lateral halves may be transposed laterally, or either half turned half 'round above or below the other. The half sheet may be given one fold before the main section (1) is cut off, if desired. Two parallel folds for the 8, three R.-A. folds for 16; insert 16 in 8. Saddle S.

Broad Duodecimo, 12mo, 12°

70—PLAN—W. & T. OR S.-W.



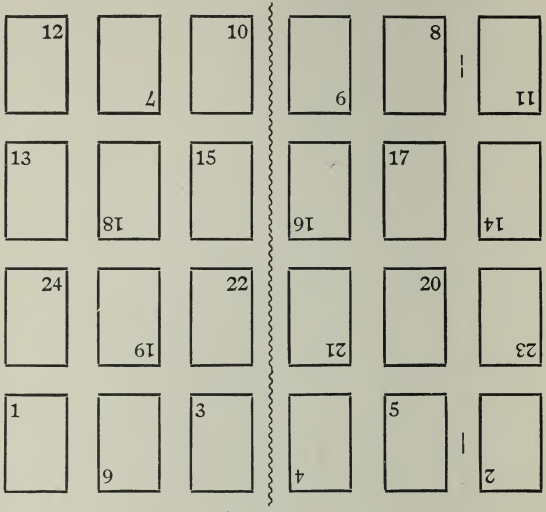
70—FOLD

1	24	21	4
12	13	20	5
6	16	17	8
10	15	18	7
11	14	19	9
2	23	22	3

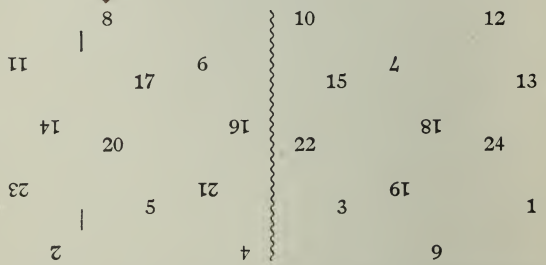
Plan 70 is a form of 24 broad pages; the two vertical 12-p. sections may be transposed laterally. Four right-angle folds to the half sheet; saddle stitch.

The 'Legal' Duodecimo

71—PLAN—W. & T. OR S.-W.



71—FOLD



Plan 71 is a form of 24's the 'legal' way; transposed by starting with p. 1 at 3. 5, 13, 15, 17; or vertically or laterally by half sections. Half sheet to fold. Saddle S.

Initials

The position of the first page of a form is governed by the manner of folding the sheet, and the position of the first page governs the positions of all the other pages of the form.

PAIRING PAGES

Whatever the location of the first page of the form may be, the pages must follow each other around the form in the same manner in all cases—that is, to correspond with the position of the first page—and it should be remembered that the first and last pages of any form or of any separate section of a form, must lie together—odd page to left and even page to right when you stand at the foot of the page. Then the second page and the next to the last page of the form or separate section are together, then the third and the third from the last, and so on to the completion of the form, with the odd pages to the left and the even pages to the right when viewed from the foot of page. Whatever the number of pages in the form, each and every pair of pages is separated by the "back" margin and surrounded by trim margins.

This principle of complementary positions—first and last, second and next to last, etc., obviates the necessity for memorizing the positions of all the pages of any form, and enables the stoneman to lay a form correctly when he knows only the positions of the pages of the first half of the form, or front half of the work. If the pages of the first half (by which is meant all the pages that are to appear on the front half of a signature are laid down correctly, it is impossible to mistake the location of the back pages, if proper attention is given to the "pairing" of pages.

According to this rule, also, the two folio numbers may be added together, and the sum of each and every pair of pages in any particular form will be the same. This method of addition to prove the correctness of the pairing may be used with all forms, but the sum of the two folios will vary according to the number of the

initial page and the number of pages in the signature, form, or work.

The starting point, or position of the first page of a form, depends on the shape of paper, number of pages in the form and—equally important—the manner of folding. The table on page 71 made up from the "common" forms in this book, show the number of starting points for each and every regular form, from 4 to 64 pages. By a careful study of the table and the plans referred to you will fully understand the underlying principle of the philosophy of imposition—that any form may be made up in as many different ways as there are 4-page sections in the form. The figures opposite each plan number represent the several locations which the first or initial page may occupy in that form.

A two-on form may be made up from as many starting points as there are four-page sections in half the form.

FOUNDRY FORMS

Forms for the electrotype foundry should have type-high bearers on all sides, and, if to be cut into sections, should have cut-off rules for guides in cutting; it is usual to allow not less than 12 points space for cutting. These forms should be locked very carefully, squared accurately, and every portion made to fit. Mounted blocks are planed to .918″ in height and trimmed flush with printing surface; unmounted plates for patent blocks are beveled at sides and foot for engagement with the clamps on blocks; these plates are usually 11 points in thickness.

Every small form should be locked up in such manner as to leave the corner diagonally opposite the "square" corner open, for convenient and safe handling.

Place forms in rack with side or end quoins out, so that form may be the more easily removed.

Corner quads are valuable aids in matching the corners of rule borders around whole pages; but if the page consists of two or more sections, these quads may occupy too much space to be used.

The Sextodecimo, 16mo, 16°

72—PLAN—W. & T. OR S.-W.—72—FOLD

4 29 28 5	6 27 30 3	3	30	27	6	5	28	29	4
13	14 19 22 11	14	19	22	11	12	21	20	13
16 17 24 9	10 23 18 15	15	18	23	10	9	24	17	16
1	2 31 26 7	2	31	26	7	8	25	32	1

The Sextodecimo

73—PLAN—W. & T. OR S.-W.

73—FOLD

24	25	28	21	22	27	26	23
17	32	29	20	19	30	31	18
8	9	12	5	6	11	10	7
1	16	13	4	3	14	15	2

Cut here on Folder

8	9	12	5	6	11	10	7
1	16	13	4	3	14	15	2

The Sextodecimo
74—PLAN—W. & T. OR S.-W.
74—FOLD
16 17 20 13 14 19 18 15
9 24 21 12 11 22 23 10
8 25 28 5 6 27 26 7
1 32 29 4 3 30 31 2
16 17 20 13 14 19 18 15
9 24 21 12 11 22 23 10
8 25 28 5 6 27 26 7
1 32 29 4 3 30 31 2

The Sextodecimo

75—PLAN—W. & T. OR S.-W.

75—FOLD

16	17	24	9	10	23	18	15
1	32	25	8	7	26	31	2
4	29	28	5	6	27	30	3
13	20	21	12	11	22	19	14

(This side up on Folder)

16	17	24	9	10	23	18	15
1	32	25	8	7	26	31	2
4	29	28	5	6	27	30	3
13	20	21	12	11	22	19	14

32 pp. book imposition; Dexter Single Marginal Book Folder.

The Sextodecimo

—76— FOLD —76— PLAN — W. & T. OR S.-W.

24	9	16	17	18	15	10	23	23	10	15	18	17	16	9	24	25	8	1	32	31	2	7	26
25	8	1	32	31	2	7	26	26	7	2	31	32	1	8	25	24	9	16	17	18	15	10	23
28	5	4	29	30	3	6	27	27	6	3	30	29	4	5	28	21	12	13	20	19	14	11	22
21	12	13	20	19	14	11	22	22	11	14	19	20	13	12	21	28	5	4	29	30	3	6	27

The Sextodecimo
77—PLAN—W. & T. OR S.-W.
77—FOLD
10 23 18 15 16 17 24 9
7 26 31 2 1 32 25 8
11 22 19 14 13 20 21 12
6 27 30 3 4 29 28 5
10 23 18 15 16 17 24 9
7 26 31 2 1 32 25 8
11 22 19 14 13 20 21 12
6 27 30 3 4 29 28 5

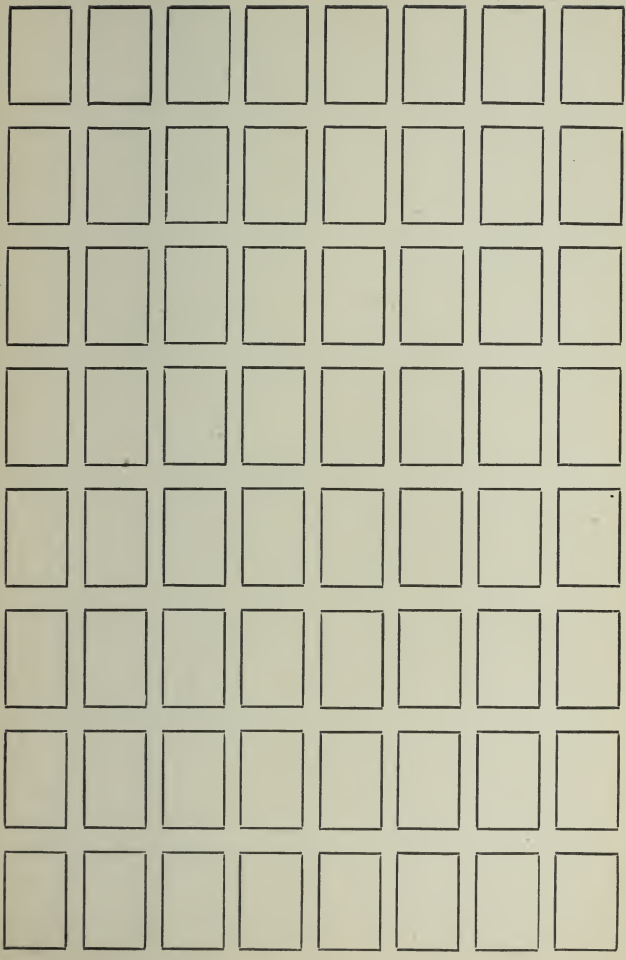
The Sextodecimo
78—PLAN—W. & T. OR S.-W.
78—FOLD
8 9 12 5 6 11 10 7
1 16 13 4 3 14 15 2
(This side up on Folder)
Cut here on Folder
8 9 12 5 6 11 10 7
1 16 13 4 3 14 15 2

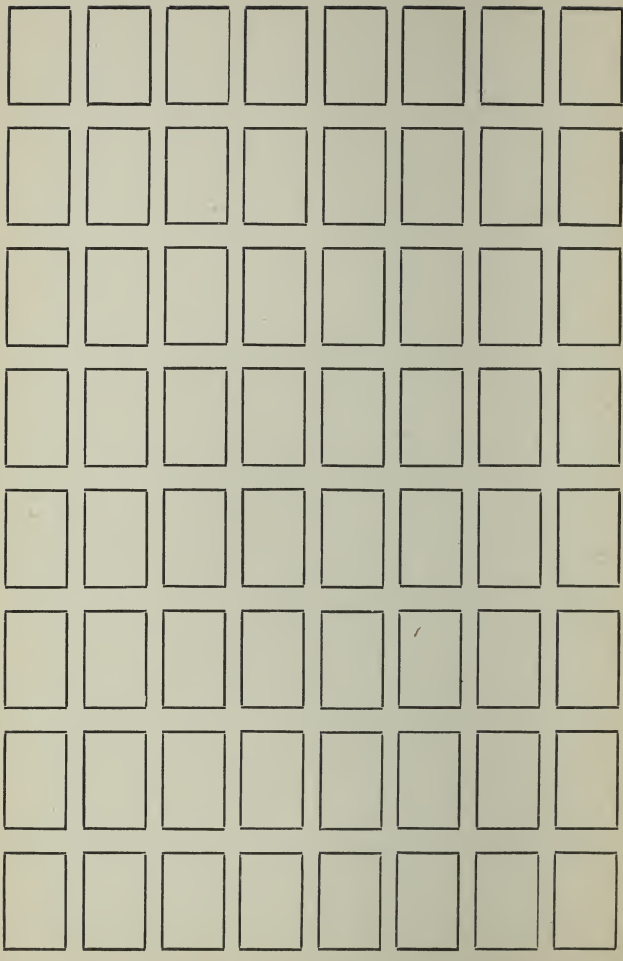
Two 16-p. Sigs.; Dexter Double 16 and Double 32 Book Folder.

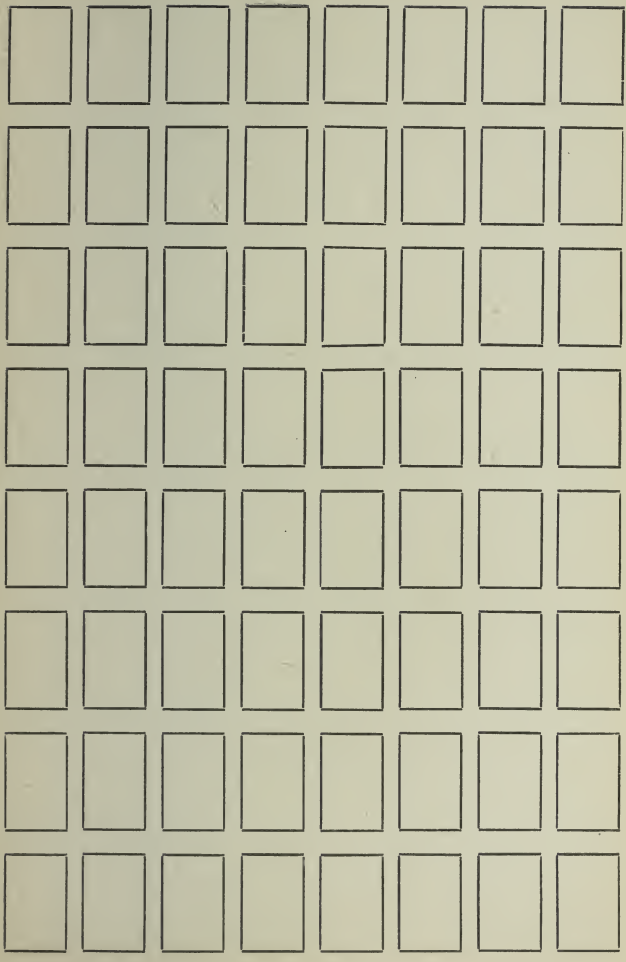
The Sextodecimo

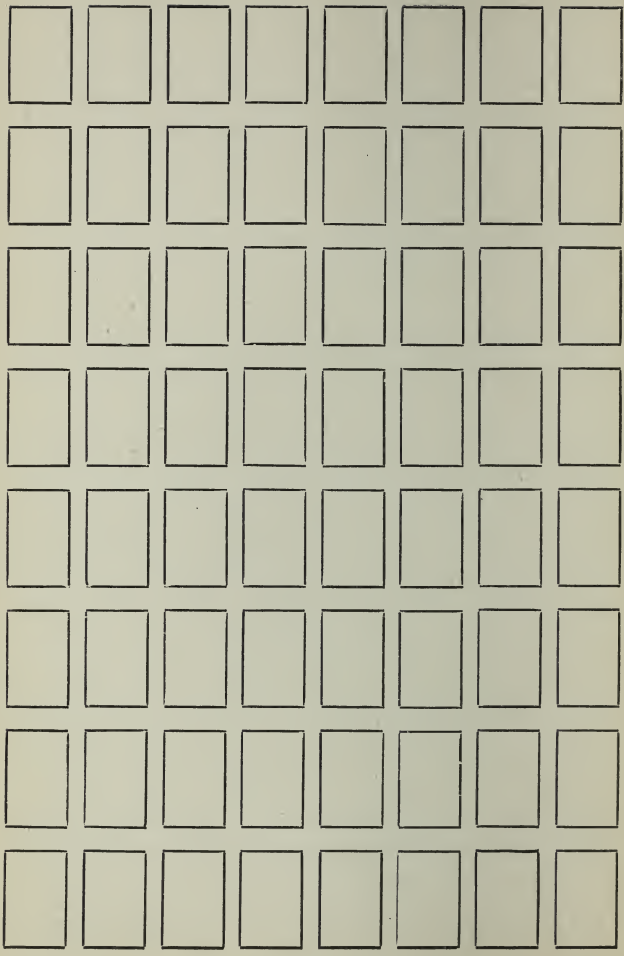
79—PLAN—W. & T. OR S.-W.—79—FOLD

| | | |







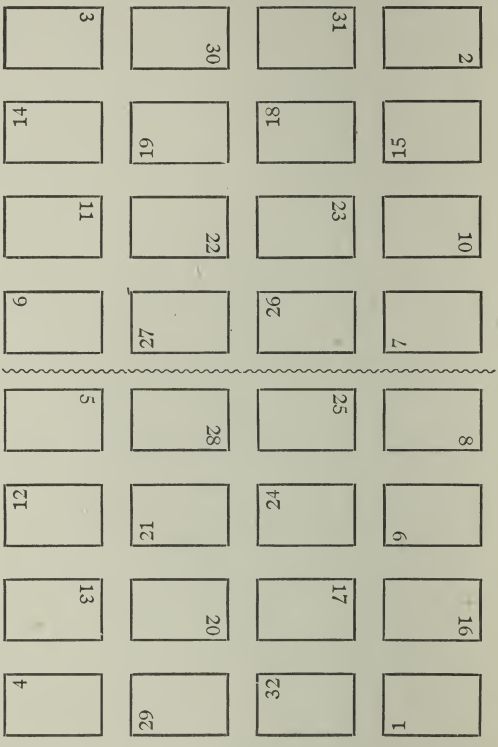


The Sextodecimo

32 pp. in four 8's, for heavy stock; H. F. and Dexter N. and P. and S. M. Folder.

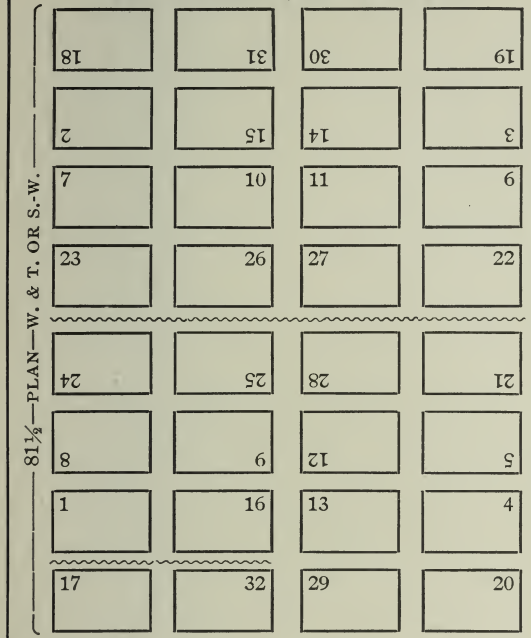
The 'Legal' Sextodecimo

81—PLAN—W. & T. OR S.-W.

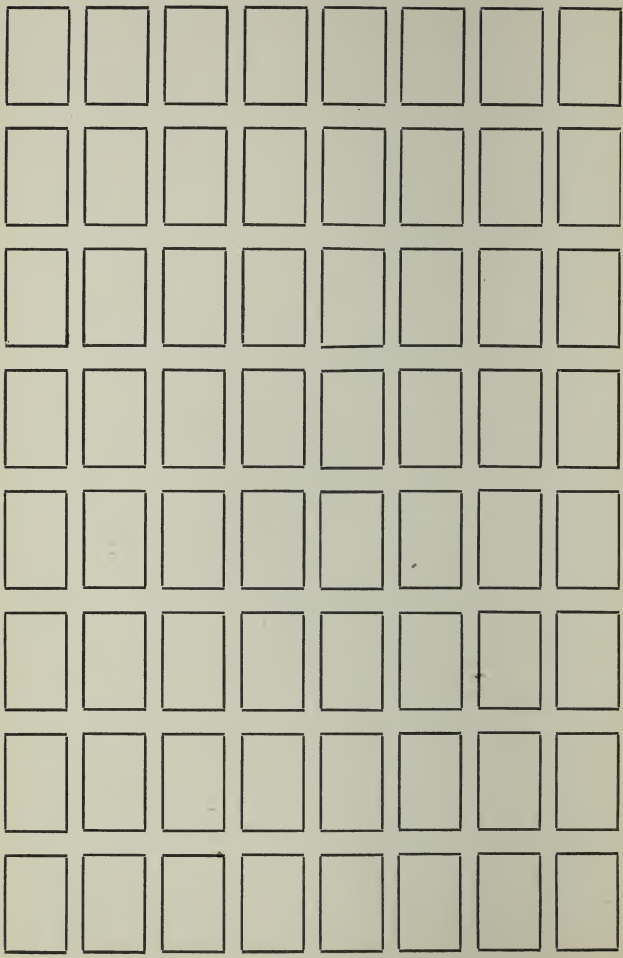


Plan 81 is a form of 32 pages the 'legal' way; may be transposed laterally or vertically by half sections; also by starting with p. 1 at 7, 9, 15, 19, 21, 27, 29; in 16's, etc. Like all forms of this class, the back margin is at head of page. Hand fold, 3 over 2, 28-29, 24 25, 16-17; saddle.

The Broad Sextodecimo

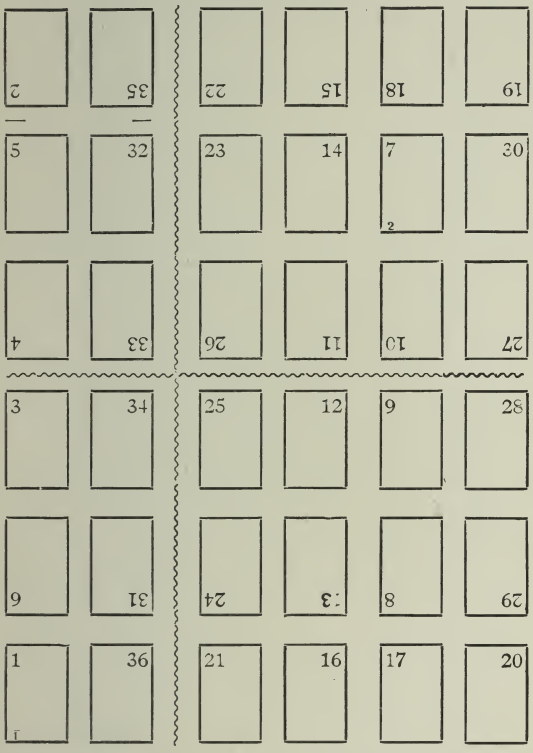


32 pp., hand and special machine fold; two 16-p. sigs.; three folds, saddle or sew 2-on; cut.



The Octodecimo, 18mo, 18°

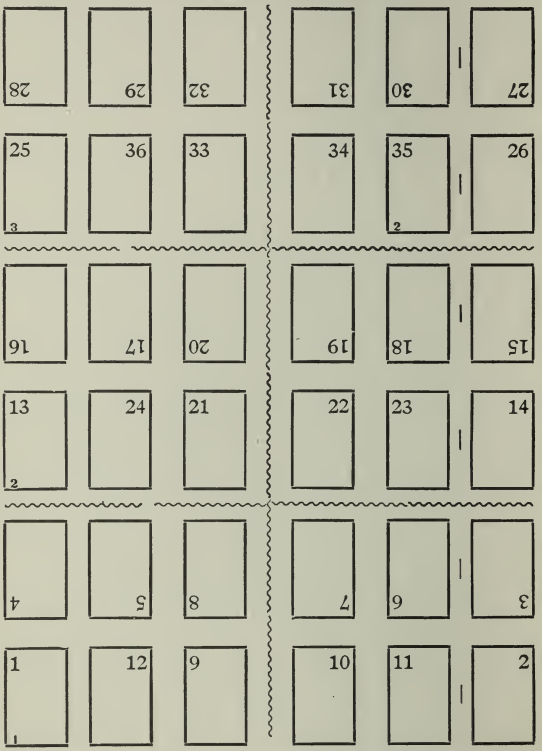
82—PLAN—W. & T. OR S.-W.



Plan 82 is a form of 36 pages, composed of a 12-page main section and a 24-page insert. Dexter News and Periodical Folder or hand fold for the 24-page section, hand fold for the 12. 24 insert in 12. Saddle stitch.

Thirty-Six Pages

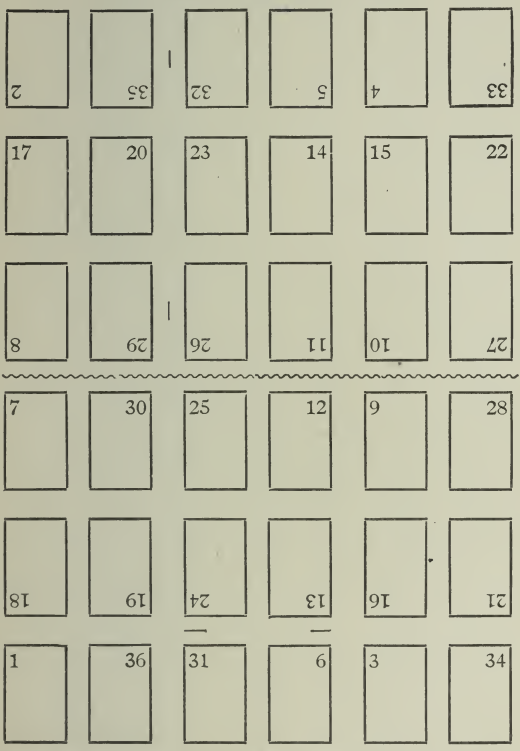
83—PLAN—T. OR S.-W.



Plan 83 is a form of 36 pages, composed of 3 12-page signatures. Dexter S.-M. Book Folder for each 12-p. section. "Gather;" side stitch. Easily folded by hand, but the side stitch is not good except for heavy stock.

Thirty-Six Pages

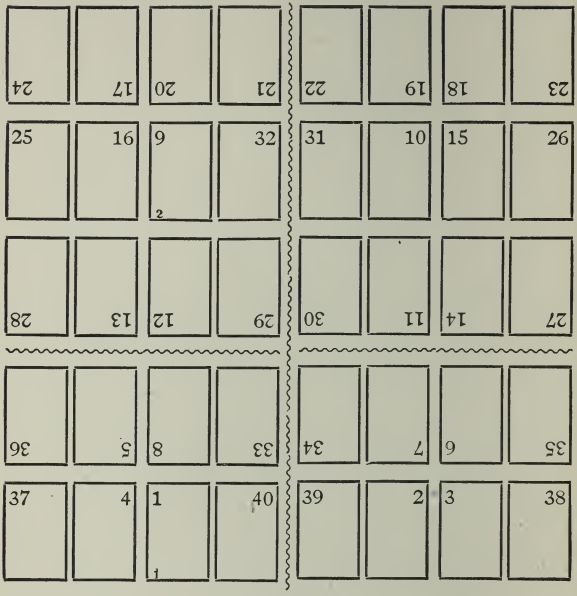
84—PLAN—W. & T. OR S.-W.



Plan 84 is a form of 36 pages, which may be used for small editions on light-weight stock. Hand fold; p. 27 over 26, 9 over 8, 12 over 13, 7 over 6, 19 over 18; five folds; saddle stitch.

Forty Pages

85—PLAN—W. & T. OR S.-W.



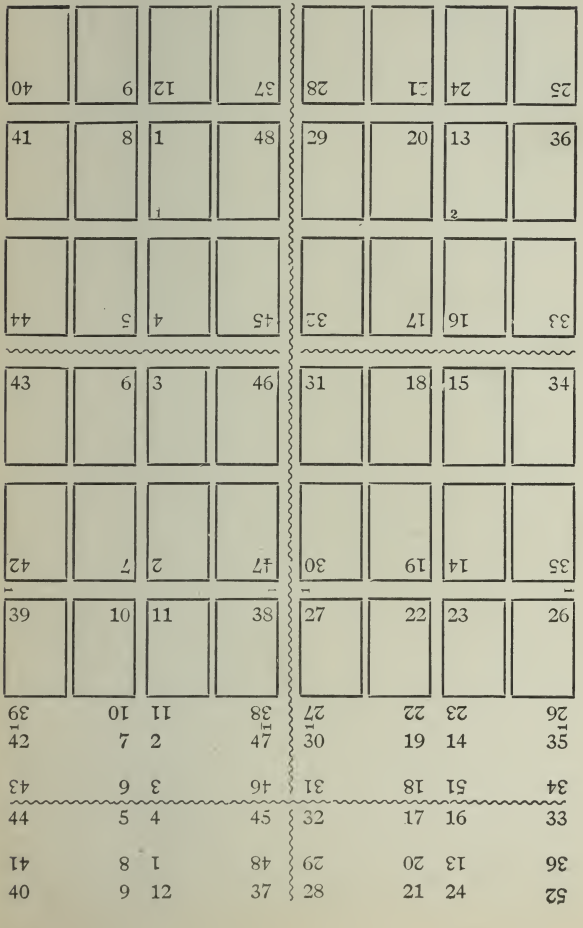
FOLD

23 18 19 22 21 20 17 24
26 15 10 31 32 9 16 25
27 14 11 30 29 12 13 28
35 6 7 34 33 8 5 36
38 3 2 39 40 1 4 37

Plan 85 is a form of 40 pp, composed of a 16-p. main section and a 24-p. insert; H. F. or Dexter N. and P. Folder.

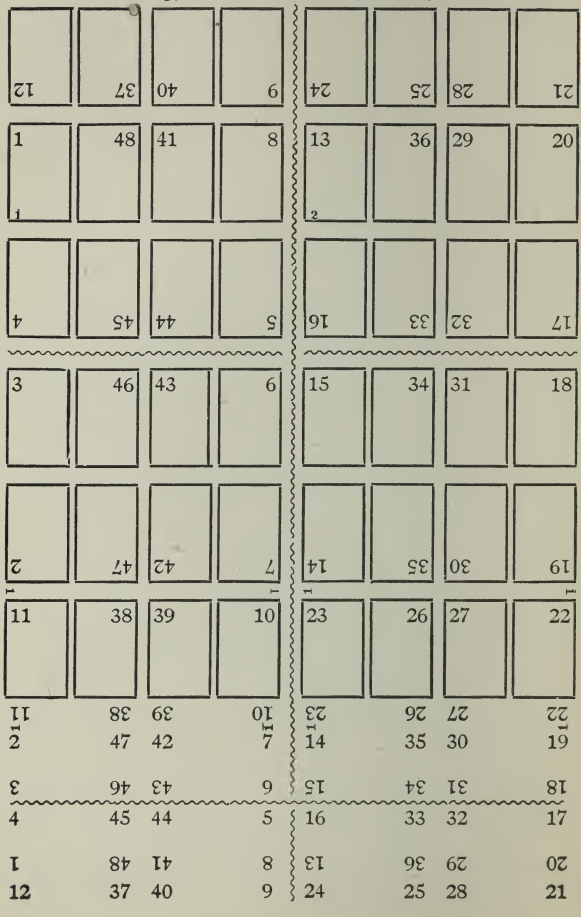
Double Duodecimo, 24mo, 24°

86—PLAN—W. & T. OR S.-W.



Forty-Eight Pages

87—PLAN—W. & T. OR S.-W.



Imposition

Read carefully the instructions on job ticket. Be sure that you understand fully what is to be done, so that no difficulty can confuse you as to the proper method of doing it. Do not take anything for granted, but get definite instructions.

The stoneman must know how to make up pages in the galley, tie them securely, handle them with speed and certainty, "lay" them in their proper order, place the necessary furniture between and around them, and lock them solid and square in the form, insuring safe and satisfactory handling in the pressroom.

The education of the stoneman neither begins nor ends with a knowledge of the various plans of imposition. The system of imposing forms developed in this book shows very clearly that it is only necessary to memorize the common plans in order to apply the system to all forms, and to comprehend all the practical possibilities for initial positions in a form, be it large or small.

The ability to do a few sums in mental arithmetic is a great aid to the man of figures as well as letters—the stoneman. It is necessary that he should be accurate and quick at figuring sizes from inches to picas and picas to inches; in selecting the correct pages and placing them in their proper positions in a form; in deciding what furniture is needed, and in other matters that require resourcefulness and promptness. A man thus equipped does his work without worry and without error.

To properly impose a form, the stoneman must have information on the following points:

Number of pages in the form, and in the entire work; size of paper; size of press; hand, or machine fold; and if machine fold, which one; whether pages are "straight away" or "insert"; and if insert, how many pages are to insert; the folio numbers of the first and last pages of the form; at least two of the pages that will be on the press-gripper edge of the sheet (this information can be had from the pressman

or folderman) ; how the book or work is to be bound—whether saddle or side stitch, sewed tight or flexible, round or flat back, cloth or paper bound, and how many sections or signatures; cut or uncut edges; size (in inches) of the finished work. All the conditions mentioned affect the work of the stoneman, and if he has a thorough understanding of the character of the job he will proceed to do his part in a manner that will facilitate the work in the other departments, the resulting product being creditable to the workmen and profitable to the employer.

POSSIBLE AND PRACTICAL INITIAL POSITIONS

It must be understood that each and every position occupied by an odd-numbered page in any form is a "possible" initial-page position, but that only half of these positions are practical. Only a very few of such odd-numbered positions as lie in a form with the head of the page toward the stoneman when he stands in the usual place at the foot of the form, are ever used—three are shown, pages 37, 49, 61, lower half of plan 91—and in such cases the same result could be accomplished by laying the form in the usual way, with the foot of the initial page toward foot of form, and reversing the press-gripper edge. It will thus be seen that, for all practical purposes, the initial page of a form may be placed in any odd-numbered position which permits the page to lie in the form with foot toward operator when he stands at foot of form. This means that only half the odd-numbered positions in a form are practical initial positions, and brings out more clearly the idea that any form may be imposed in as many different ways as there are four-page sections in the form.

This statement in regard to the number of ways a form may be imposed applies without variation or exception to all forms imposed in the regular way, whether for hand or machine fold, because every book must be made up of 4-page sheets containing two "odd" pages and two "even" pages. The "mystery" of imposition need no longer be in any degree a mystery. A thorough study of the subject of imposition reveals the fact that it is not difficult to understand if a correct knowledge of its basic principles has been acquired.

THE FORM

A "form," as the word is used in this book, means enough pages to cover both sides of the paper upon which they are to be printed.

The basis of all forms is the 4-page section. If the positions of two pages of a 4-page section of a form are known, the two pages that "back" them must be in such a position that when the sheet is "perfected" and folded the four pages will appear in the order, 1, 2, 3, 4. This is true of all regular forms.

The pages of each form must be treated in pairs—an odd-numbered page at the left and an even-numbered page at the right, when you stand at the foot of the pair, "back" furniture between them, and the sum of the folios must be the same for each pair throughout the form. Head to head with each odd page will be an even page; head to head with each even page will be an odd page in every regular form.

Forms are shown in this book for three styles of work—the oblong, in which the leaves are turned the narrow way, to the left, in reading; the broad, turned to the left the long way, and the legal, the leaves turning the long way, from the reader.

The shape of the page may be oblong, broad, square, or long and narrow, in each of the three forms. In the oblong and legal forms the type lines run the narrow way of the page, while in the broad form they run the long way.

Forms, like pages, may be oblong, broad, square, or long and narrow.

Forms are simple, multiple, complex, and inset.

A simple form is any form that is made up of continuous or "straight-away" pages, whether work and turn or sheetwise, the whole form making a complete job, or one signature or section of a work.

Multiple forms are made up of equal sections of same work.

Complex forms are composed of unequal sections of same work, or equal or unequal sections of different works.

Multiple and complex forms are made up of a combination of two or more simple forms printed either work and turn or sheetwise. If folded by hand, the printed sheet is slit into halves, thirds or quarters on the press

or cut on paper cutter and then folded; if folded on machine, the sheet is cut on folder after the first fold.

Inset forms are made up so that section 1—the main section—forms a sort of cover for the second section; or if there are four sections to insert, the fourth will insert in the third, these two in the second, and these three in the first; or there may be four sections with two inserts—the fourth in the third and the second in the first, making two signatures of the two inserts.

INSETS

Insets are often used in trade publications. They consist of a single leaf, or several leaves. These leaves are bound into the work, trimmed with it, and are as much a part of it as any other portion. Insets should be placed in the middle or at the end of a signature, and the folio numbers beyond the inset should be increased so that its pages will count as so many pages of the work.

FOREKNOWLEDGE

The stoneman should know the number of pages required for a form; the initial page; if to be printed work and turn (W. & T.) or sheetwise (S.-W.); and if sheetwise, whether "outside" or "inside" is to go to press first; size of paper; allowance (in inches) for gripper margin on press; method of folding, hand (H. F.) or machine (M. F.), and binding, and whether to be made up to insert or in one or more separate signatures. Presses are made to print oblong sheets, and if the pressman is to produce work of good register the form must be imposed so that the paper will be turned over the long way to be "backed up."

The direction in which the pages of a form follow each other is governed by the size of the pages, the size of the sheet and the number of pages in form. Suppose the sheet is 25x38, the type pages are the right size to make a trimmed book 6x9 inches, and 16 "straight" pages are to be printed in the form. The 25″ way of the stock will take 4 pages the 6″ way, and the 38″ way of stock will take 4 pages the 9″ way, and $4 \times 4 = 16$ pages, the size of form. The pressman turns the stock the long way (whether printed work-and-turn or sheetwise) and it is necessary to lay the pages with their long way the long way of the paper,

and necessarily the long way of the form, so that if either of the two lower initial positions, 1 or 13, plans 33 and 35, is chosen for the initial page, the second page will be placed on the opposite end of the form, vertical to and with head toward head of initial page; if the position of page 7, or 11 (plans 34 and 36), is chosen, for the initial page, the second page will come under and foot to foot with the initial page. The foregoing is clearly shown also in the title page of this book. This brings the heads of the pages at right angles with the long way of sheet. If broad pages, the initial pages would be placed in different positions in the form (plans 37, 38, 39, 40), with heads of pages at right angles with the narrow way of the sheet.

SECTIONS

Stonemen should keep in mind the fact that binders prefer to have work delivered to them in signatures made up of sections of an equal number of pages—that is, if a 16-page is in two sections, it should be made up of two 8's rather than a 12 and a 4, etc. Where it is not convenient or not possible to divide a form into equal sections, the main section should be the smaller, because, being on the outside, it is not so easily disarranged in binding. For this reason all the inset forms of unequal sections in this book show the small main section.

VERIFICATION

The old method of adding the folio numbers of two contiguous pages of a form to make a sum one greater than the number of pages in the form is good enough if the initial or first page is 1, but if the initial page of the form has any other odd number, this rule will not work. Suppose there are 8, 12, 16, 24, or 32 pages in the form and the initial page is 3; for the 8 we will have $3+10=13$; for the 12, $3+14=17$; for the 16, $3+18=21$; for the 24, $3+26=29$; for the 32, $3+34=37$, etc., so it is plain that this rule will not be satisfactory for any form whose initial page is any number above 1. The rule that the first and last, second and next to the last, etc., shall lie together is the only safe one.

The 16-page section is more generally used than any other in book work as the basis for forms, and the most profitable folding machines are those that fold

double and quadruple 16's. Books with sections of eight leaves—16 pages—octavo—8vo—8°—are more easily and neatly bound than larger or smaller sizes.

Two-on, three-on, and four-on forms require duplicate, triplicate or quadruplicate pages, if each is for one job; or two, three or four sets of pages, if for different jobs.

Forms containing more than 32 pages are made up of double, triple or quadruple 8, 12, 16, 24 or 32 pages.

CORRECTIONS

In making corrections in the form remember that any even page and the odd page following it will face each other in a book, and both will be in the same half of the form. Any odd page and the even page following it will back each other in a book and each will be in opposite halves of the form.

COLOR

Color forms may be made up by means of an oiled sheet, or side by side on the galley, or by means of a folded sheet of the paper. Put the same number of leads in the mating pages. Use slugs and solid furniture wherever possible. Make up all the pages of a color form to the size of the largest page. This latter should be done in all forms with pages of irregular sizes. Place two or more leads along each of the four dimensions of a color page, so that it may be moved easily in getting register. Mark the quoins, so that shifting may be noticed, or fill them with wet paper so they cannot slip.

SHEETWISE

A "sheetwise" form is made up of two sections, the outside and the inside, printed on opposite sides of the sheet. As many full sheets will be required as there are to be copies of the work.

A sheetwise form is a work and turn or tumble form divided in half, and a work and turn or tumble form is a combination in one form of the two sections of a sheetwise form. Any form may be divided in half and printed sheetwise, if paper is of suitable shape.

In determining the inside and outside sections of a sheetwise form, there is no better method than a thorough knowledge of the relationship of the two divisions of such forms on the part of the stoneman. Such a man is never in doubt in this matter. Knowing the

Tables of Outside and Inside Sections

8-p—	1	2	3	4	5	6	7	8																						
12-p—	1	2	3	4	5	6	7	8	9	10	11	12																		
16-p—	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16														
24-p—	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
32 p—	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

TABLE NO. 1—CANCELLATION

Outside—Uncancelled Numbers
Inside—Cancelled Numbers

TABLE NO. 2—PLAN 91

OUTSIDE	INSIDE
1	2
4	3
5	6
8	7
9	10
12	11
13	14
16	15
17	18
20	19
21	22
24	23
25	26
28	27
29	30
32	31
33	34
36	35
37	38
40	39
41	42
44	43
45	46
48	47
49	50
52	51
53	54
56	55
57	58
60	59
61	62
64	63
65	66
68	67
69	70
72	71
73	74
76	75
77	78
80	79

TABLE NO. 3—PLAN 66

OUTSIDE	INSIDE
3	4
6	5
7	8
10	9
11	12
14	13
15	16
18	17
19	20
22	21
23	24
26	25
27	28
30	29
31	32
34	33
35	36
38	37
39	40
42	41
43	44
46	45
47	48
50	49
51	52
54	53
55	56
58	57
59	60
62	61
63	64
66	65
67	68
70	69
71	72
74	73
75	76
78	77
79	80
82	81

TABLE NO. 4

PAGES

FRONT	BACK
1	24
2	23
3	22
4	21
5	20
6	19
7	18
8	17
9	16
10	15
11	14
12	13

24 Pages Quirewise

Outside Sect'ns		Inside Sect'ns	
1st		1st	
4	12	22	3
1	24	23	2
2d		2d	
8	17	18	7
5	20	19	6
3d		3d	
12	13	14	11
9	16	15	10

order in which the pages "run" in the whole form, what folio is to begin the form and how many pages constitute the entire form, the stoneman proceeds to select and reject until he gets the required number of correct pages for the outside or inside, as occasion demands.

The sheetwise form utilizes the full sheet, both on press and folding machine, thereby increasing the product without a proportionate increase in cost. This method also allows more time for the ink to dry before turning the sheet for perfecting.

The initial page of an outside section of a sheetwise form is always the lowest odd-numbered page of the form. The initial page of an inside section of a sheetwise form is always the lowest even-numbered page of the form.

There are four methods of determining to which of the two sections of a sheetwise form any page of a form belongs. As most of the work of the present day is done sheetwise it is necessary that the stoneman should know how to select the pages for any section or part of a section of a form.

One method is by cancellation, and in Table No. 1. page 113, the cancelled figures indicate the pages of the inside, the uncancelled figures being the pages of the outside section. It must be understood in all cases that the number of the initial page of a form is the guide in selecting the two sections of a sheetwise form, and that the folio number of this initial page may be any odd number. This table is intended to show the order in which the numbers are to be cancelled. The first page of any form is always the first page of the "outside" of that form, and the second page is always the first page of the "inside." Each "side" of such forms has the same number of "pairs" of pages.

Tables Nos. 2 and 3 are infallible guides for selecting the outside and inside pages of sheetwise forms, as the odd numbers in the two left-hand columns comprise all the possible starting points (odd pages) from 1 to 80. The left-hand column of Table No. 2 contains the outside pages of all sections and signatures for all forms in which the initial page of the first section or signature is any one of the odd numbers in the column; as 1, 5, 9, 13, 17, 21, etc., by fours without limit. But if the section, signature or form is to begin

with any other odd number, as 3, 7, 11, 15, 19, 23, etc., then the second table will be the guide, and those pages that are shown as belonging to the inside in the first table become outside pages in the second table, the odd numbers of which constitute all the possible initial pages of all sections and signatures for all forms in which the initial page of the first section or signature is any one of the odd numbers of the column. These two methods of determining outside and inside pages never change, because they contain all the odd numbers up to 80, and may be extended to cover the largest work that will ever be printed. It must be understood, of course, that the first or initial page of any work is always an odd number.

There is an old rule that if the folio number is divided by 4 even or with 1 over, the folio belongs to the outside; if divided by 4 with 2 or 3 over, it belongs to the inside. This rule is good if the form begins with 1, or any odd number shown in the column of "outside" pages in Table No. 2; but if the form begins with any odd number in the column of "inside" pages the rule must be reversed; that is, division by 4 even or 1 remainder puts the page in the "inside" class, and with 2 or 3 remainder puts it in the "outside" class.

The observing student will notice that the pages are separated in pairs after the first page in each table for the outside, while the inside consists of pairs all the way; and the last page, with the first page, completes the pairs on the outside. If the sections, signatures or the whole form contains 8 pages, the 1st and 8th pages will pair; if 12 pages, 1st and 12th will pair; if 16 pages, 1st and 16th will pair; and so on with 1-20, 1-24, 1-32, etc. It will be noticed also that 18 is on the wrong side to pair with 1, which shows the mongrel character of the 18-page form—a form that does not contain complete 4-page sections.

In printing a form sheetwise, the inside should be sent to press first. If this is not done and the presses are not provided with sheet-delivery, the perfected work must be turned over in the bindery. The folding, whether by hand or machine, is always done with the inside up. If the sheet-delivery device is used, there is no need of turning sheetwise work after printing the

second side, as it delivers sheets "printed side up or down," as may be required. In work and turn printing, one-half of the half sheets must be turned after printing, whether slit on the press or cut on the cutter, in order to deliver the work to the binder "inside up."

As forms do not all begin with page 1, it is necessary to know the number of the initial page of every form to be made up, then the pages for the two "sides" are selected or rejected in the exact order given in the Tables 2 and 3, and the pages of each section are laid down on the stone in rotation as they would be if the two sections were to be made up together in one form.

Each leaf of a book contains two pages—one "outside," the other "inside." A finished "book" consists of few or many 4-page sheets bound together at the "back" —between the two pairs of pages that lie on either side of each 4-page sheet. The numbers on these pages vary according to the initial number, the number of signatures in the book and the number of pages in each signature, but whatever the number of pages in a signature, half of its pages will belong to what is designated the "outside" and the other half to the "inside." The methods to be employed in determining the outside and inside sections depend somewhat on the character of the work

Suppose there are 24 pages to print in forms of 8 pages, sheetwise—4 pages on each side of sheet—the page numbers are arranged in two columns, the front pages in first column and the back pages in the second, and the pages would be laid down on the stone in the order shown in Table No. 4. This method is used in printing booklets, briefs and abstracts, etc., in small editions on a job press large enough to print four pages. If the work is not too large and the pages are all made up it is customary to print all the inside sections in their order, and then follow with the outside sections in their order. The sheet is turned over the long way of the pages for printing the second side, the work is folded in 8-page sheets, inserted and saddle stitched. This method will do for most work in small editions up to 48 pages.

If this method is used for work with a cover, the "body" may begin with page 3, in which case the last page of body would be 22 if the whole work (cover

included) is to contain 24 pages,—the cover containing pages 1, 2, 23, 24. Or, if there is to be a cover and preliminary matter in front, or appendix in back, none of which is to be included in the regularly-numbered pages, then the body may begin with any required odd number in the left-hand column of Table 4. A rough diagram should be made similar to that in Table No. 4, beginning the left-hand column with the number of the first page, ending the column with a number that will represent the last page of the front half of work; then begin at the bottom of second column with the next number following the last one in the first column, and so on to the top of the second column, where the last page of the body is to be placed. Divide the numbers as shown by the rules in diagram. This method is in reality a division of the pages into outside and inside sections, printed quirewise, the whole work being in one signature. The six 4-page diagrams show the exact position of pages when locked in form.

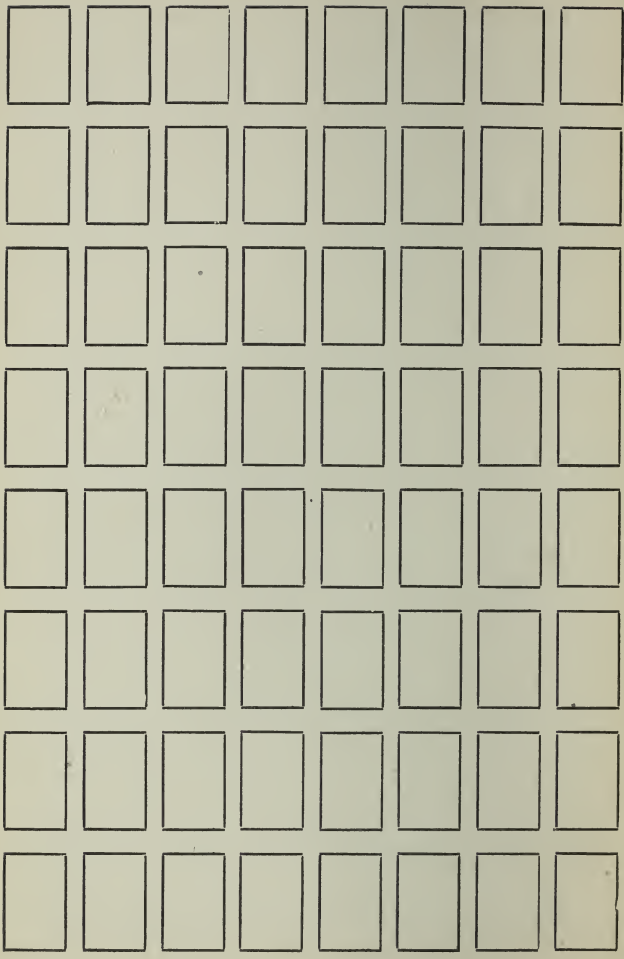
WORK AND TURN

A work and turn form contains enough "straight" pages to cover one side of the paper, the required quantity of paper being printed on one side, then turned over and printed on the other side, the pages being duplicated on the two sides, but the two halves of each side are alternated in the turn, so that the result is two half sheets each containing all the pages of the form. For this reason a work and turn form requires half as many full sheets of stock as there are copies to be printed.

A work and turn form may also be divided in half and printed sheetwise on a sheet half the size required by the full form, but a sheetwise form cannot be run work and turn because the form is made up in two sections, each section containing pages in pairs that alternate with pairs in the other section. Thus, in a form of 16 pages sheetwise, the outside will contain pages 1, 4, 5, 8, 9, 12, 13, 16, and the inside will contain pages 2, 3, 6, 7, 10, 11, 14, 15.

TUMBLE

The paper is turned toward the grippers on a tumble form. Either edge may be the gripper edge; if printed sheetwise, both become gripper edges; if of suitable shape for work and turn, either end may be the gripper edge.



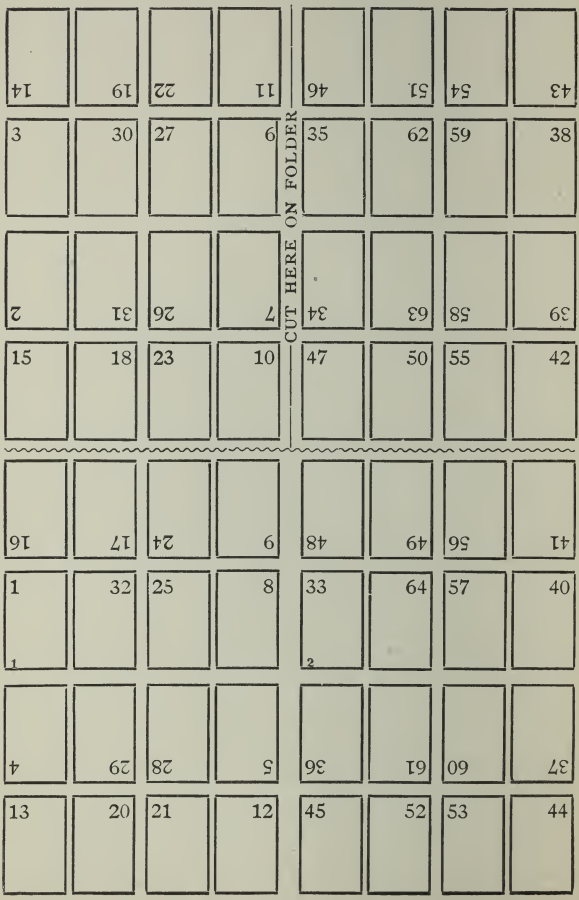
Double Sextodecimo, 32mo, 32°

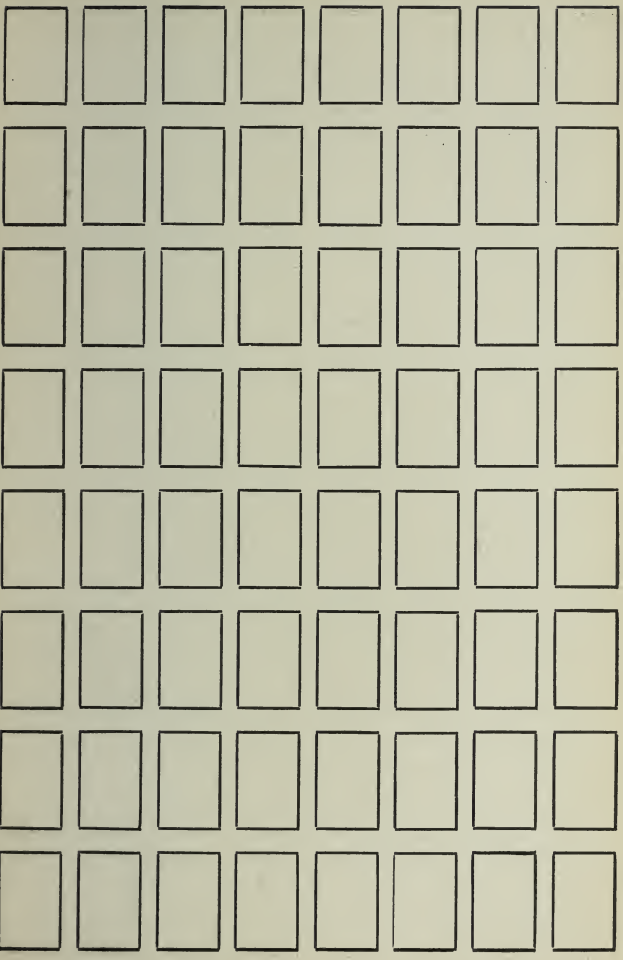
88—PLAN—W. & T. OR S.-W.

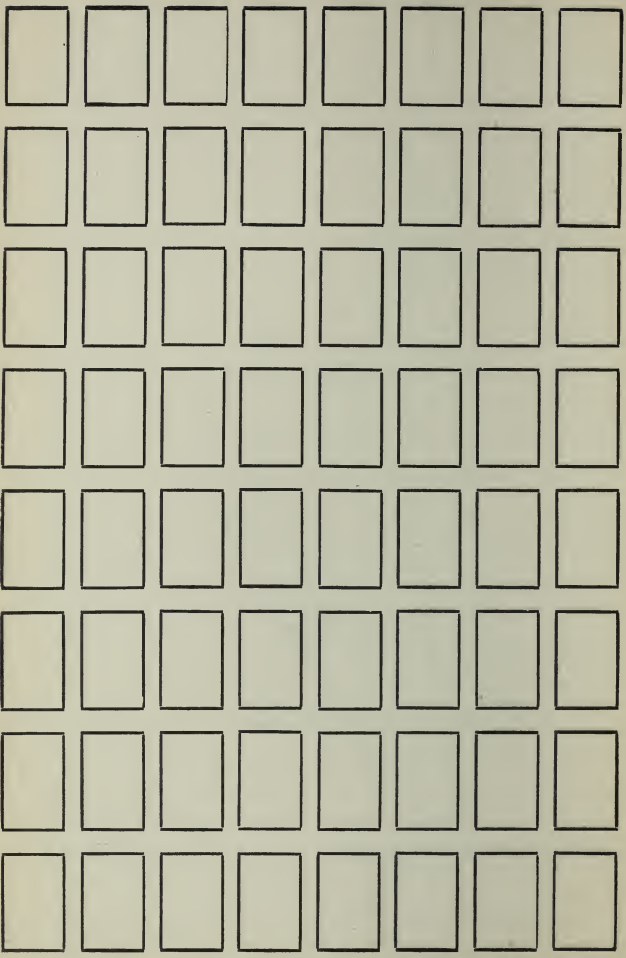
2	63	50	15	14	51	62	3
31	34	47	18	19	46	35	30
26	39	42	23	22	43	38	27
7	58	55	10	11	54	59	6
8	57	56	9	12	53	60	5
25	40	41	24	21	44	37	28
32	33	48	17	20	45	36	29
1	64	49	16	13	52	61	4

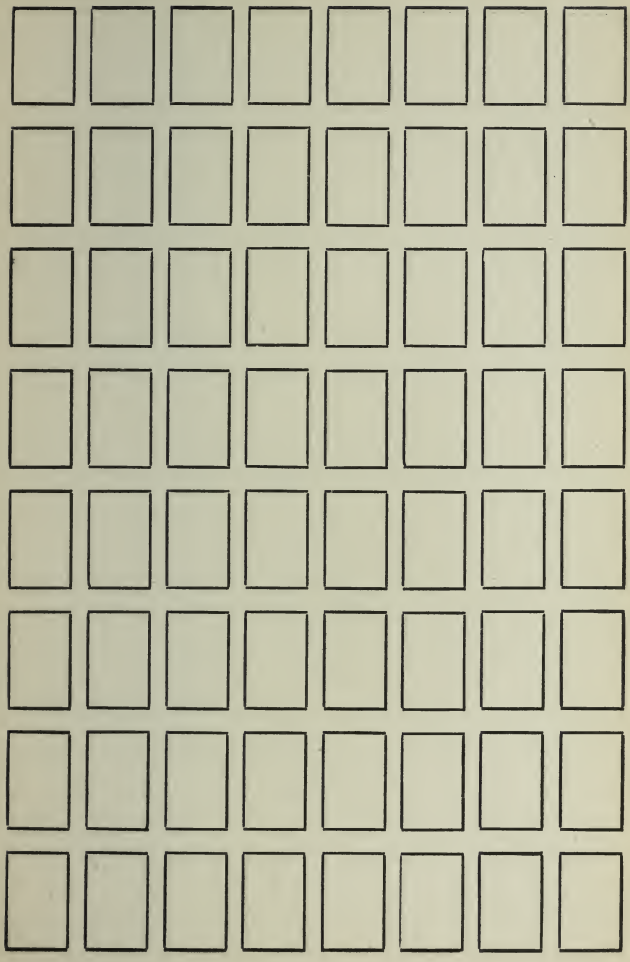
Double Sextodecimo, 32mo, 32°

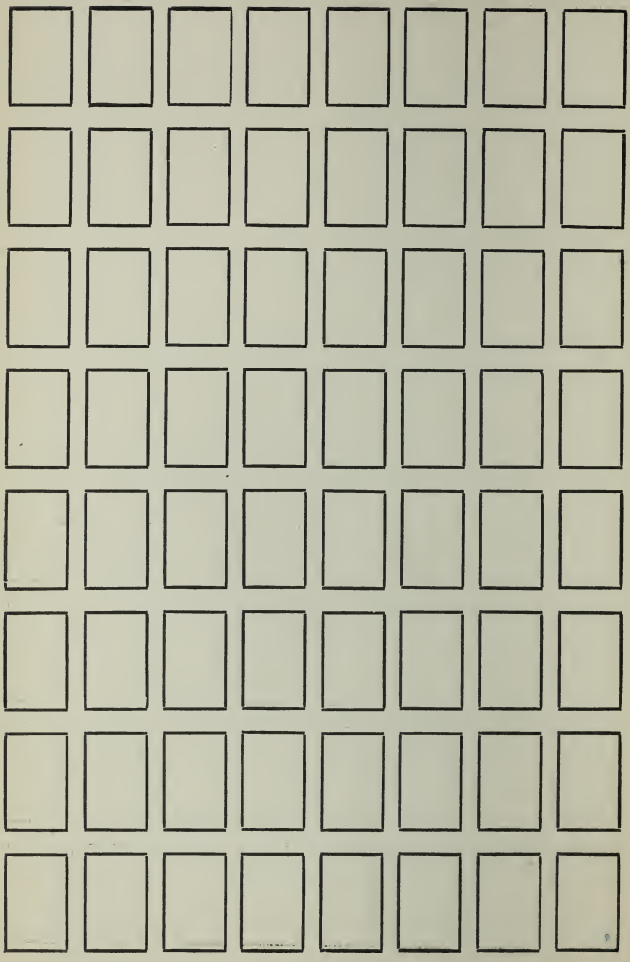
89—PLAN—W. & T. OR S.-W.

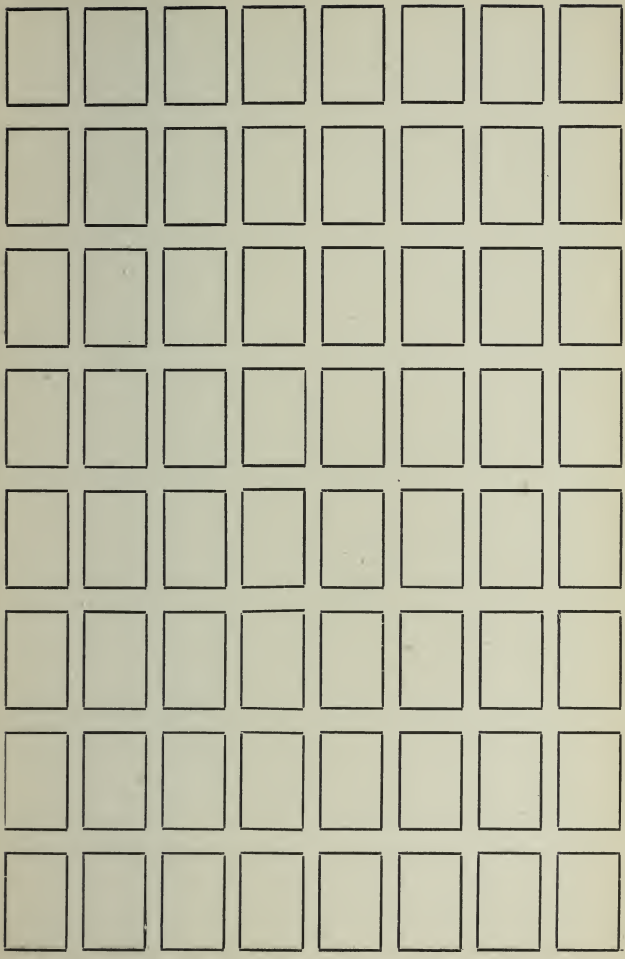


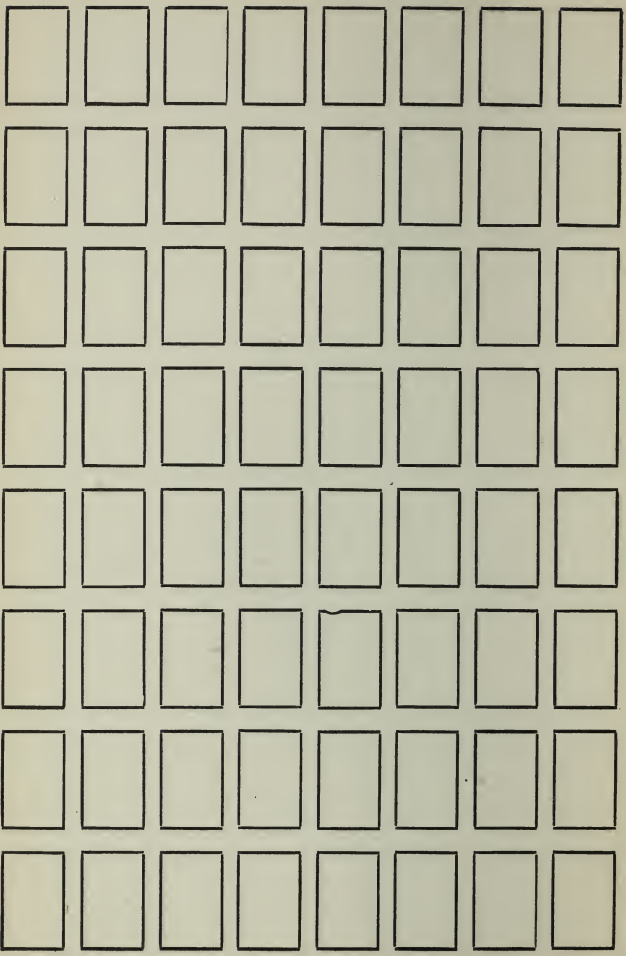


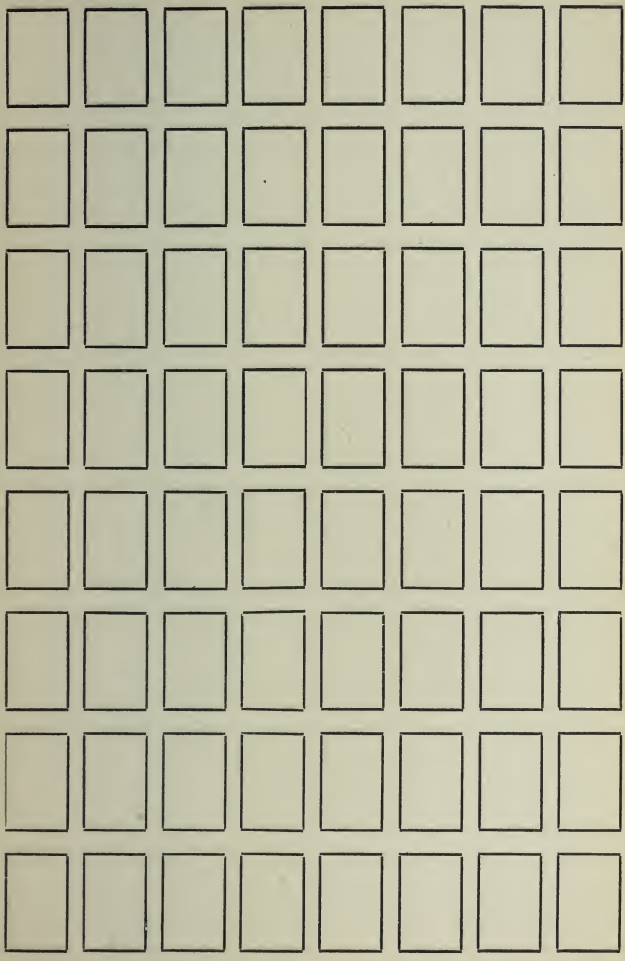


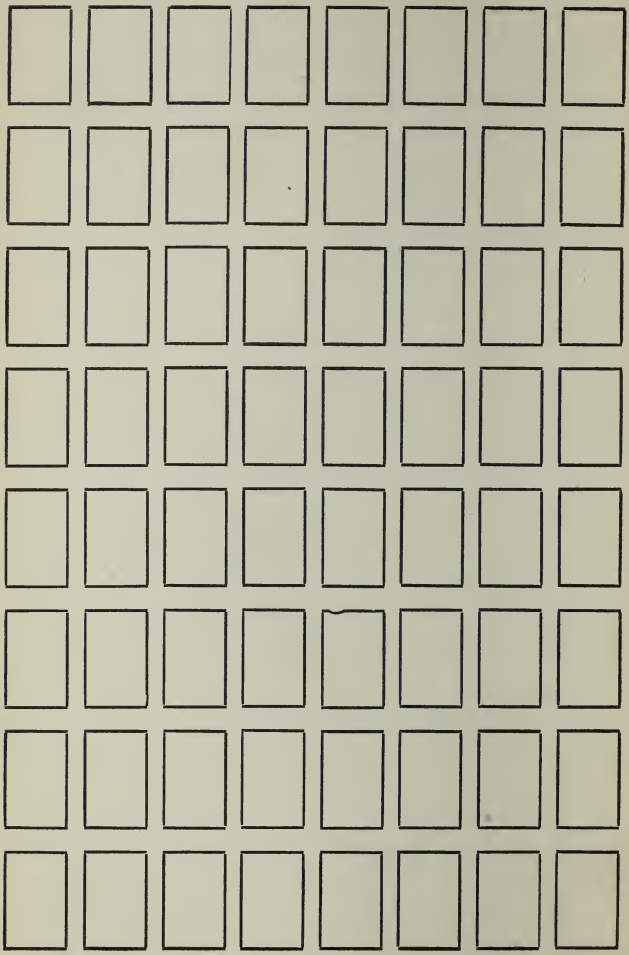






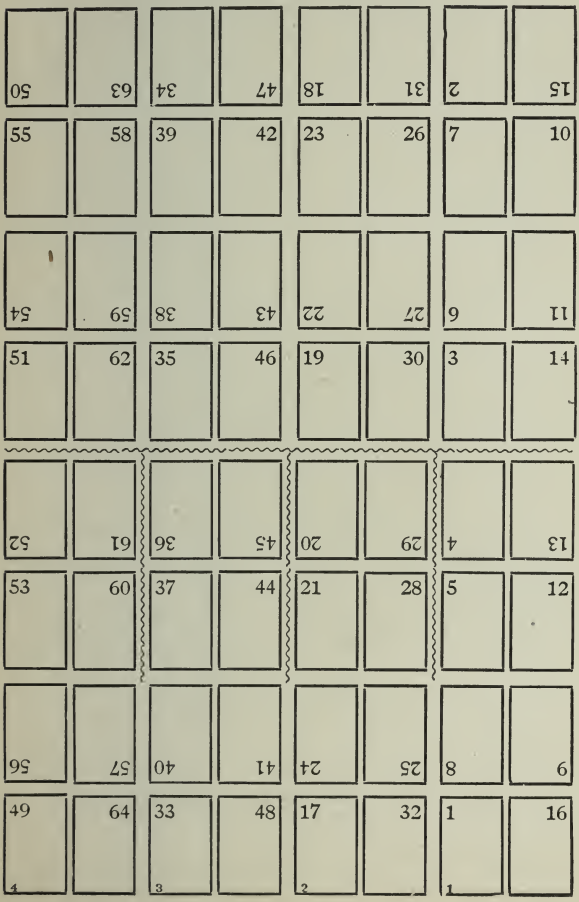


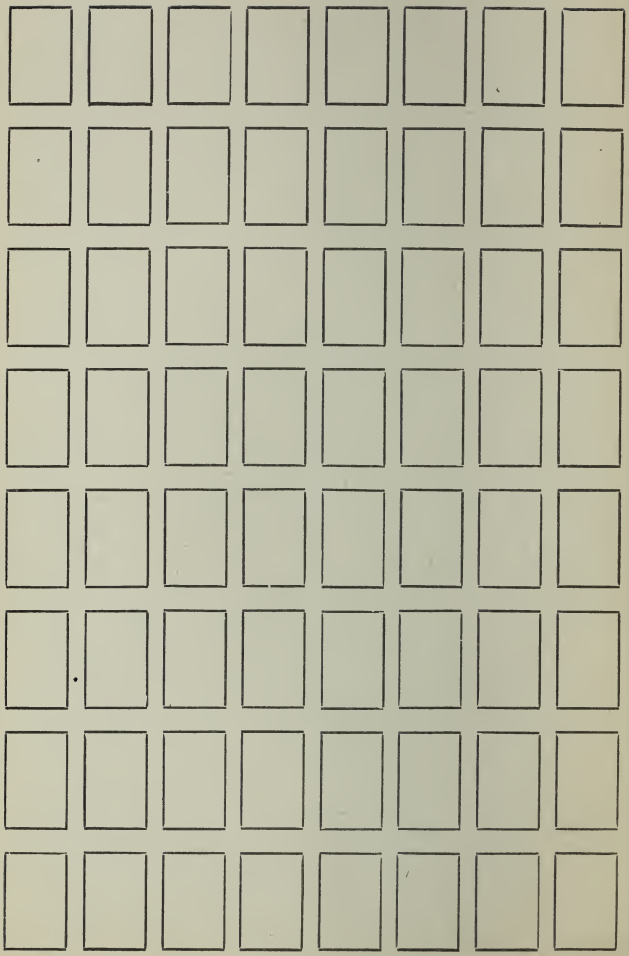




Double Sextodecimo, 32mo, 32°

90—PLAN—W. & T. OR S.-W.





PAIRED CONSECUTIVE PAGES

Only two consecutive pages in any signature will pair—that is, lie face to face in the same side of a four-page section—and these two pages are always in the middle of the signature; the first, an even number, ends the front half of the section when folded, and the other, an odd number, begins the back half of the signature. In an eight-page signature, these two pages are the fourth and fifth; in a twelve-page, sixth and seventh; in a sixteen-page, eighth and ninth; in a twenty-page, tenth and eleventh; in a twenty-four page, twelfth and thirteenth; in a thirty-two page, sixteenth and seventeenth, etc. It often happens that a two-page ad, picture, or map, must occupy two consecutive paired pages. Suppose you are running a work in straight sixteenths and a pair must be used in the fifth signature—if the work starts with page three, the fifth signature will be pages 67 to 82, inclusive, and the two middle pages of this section will be the eighth and ninth pages—74 and 75. This method of determining the middle pair can be used in all cases. These two middle pages are always located in the outside section of every sheetwise form and in the "outside" half of every work and turn form.

TRANSPOSITIONS

The stoneman should do good work, and do it in such a manner as to save labor and expense in press-room and bindery. His method of procedure should depend upon whether it is the most economical for the whole job. The two sections of a sheetwise form may be run on two presses at the same time on blank paper, transferring the half-printed sheets from one press to the other for perfecting. One-half of these sheets must be turned before folding. A row or more of pages may be printed across an end or an edge of a sheet, the guides changed, another printing, and so on until the paper is covered, the fold being two-on or more, thus reducing the time and expense of folding. The wide-awake stoneman can see many ways for reducing expense and increasing output.

There are several reasons for imposing the same number and style of pages in different ways. The usual end pages may be so "light" that the quality of the presswork is affected; a transposition to the mid-

dle, is the remedy. In color work on certain pages, one plan brings the pages for color at opposite ends of form, necessitating running the full sheet for color; a transposition may bring them on a half or a quarter sheet. It is often necessary to utilize odd sizes of paper, on an unusual shape or size of form; or to arrange for folding two, three or four on; or printing unusual numbers of pages by changing the size of the paper. The work may be intended to fold on a certain make of machine—Dexter, Chambers, Brown, Eclipse, Belmont, Stonemetz, etc.—and a transposition is necessary. It may be necessary to transpose a "tumble" form into a work and turn form in order to secure good register, or it may be possible to save work in folding by a re-arrangement or transposition.

THE PRESSMAN

The outside margins of a printed sheet are adjusted by the pressman, who should be informed by the stoneman of any peculiarity of the form; if sheetwise, work and turn, or tumble; if color, on which pages, etc. The stoneman should draw a chalk mark around the lowest folio of each form, and chalk-mark the press-gripper edge of the form.

The pressman should see that the press bed and the bottom of the form are clean before placing the form on the press. Make-ready should not begin until the imposition has been verified and the sheet registered. Unlock before planing. See that the lock-up furniture holds all lines before tightening quoins.

The pressman "perfects" a sheet by turning it over the long way. The sheet is fed to the right-hand side guide during the first run and to the left-hand side guide during the second run. By turning the sheet the long way and feeding to the left-hand side guide, the same edge and the same end of the sheet is presented to the grippers and side guides for both runs, so that if the gripper margins were properly adjusted for the first run and the form properly registered on itself, the pages of the perfected sheet ought to be in register during the entire process of perfecting the sheet. The base from which the pressman operates in securing register is the line of pages the long way of the sheet and form that lie at the gripper edge. The base from which the stoneman should operate in get-

ting register is the crossbar of the chase. If there should be any error in the register the fault is generally found to be in the pages farthest from the crossbar.

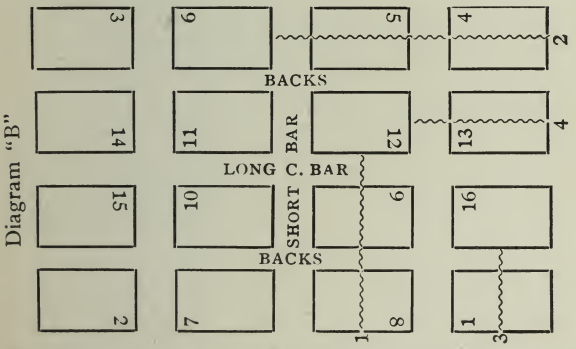
If the sheets are printed in register on the press, the "point" folding machine will fold them accurately to the printing, without regard to guide or gripper edges, as the point holes become the guides on the folder. Work and turn forms give the best register; sheetwise next in order, and tumble forms the worst.

MARGINS

Make the correct margins for a four-page section of the form, and then make the margins of all the other four-page sections exactly the same as this first one. If allowance is to be made for variation in the size of the paper, place enough extra space at the "long cross" for half the variation in the width of the paper, and the same extra space at the "short cross" for variation in the length of paper.

MEASUREMENTS

1. The distance from the outer edge of a full-width outer page of a form to the inner edge of a full-width page opposite the crossbar should be half the length or



width of the paper on which the form is to be printed.

2. From the foot of a full-length outer page to the foot of a page opposite the crossbar should be half the

length or width of the paper. 3. The distance from the "back" edge of an inner page to the front edge of its "mate"—plus the concealment in binding—should be the width of the paper page, if the front and back margins are to be equal. 4. The distance from the foot of an outer page to the head of the next page above it should be the length of the untrimmed page. The foregoing measurements are shown in diagram "B," and the same methods of determining margins may be applied to all regular forms.

GUTTERS

The "gutter margins" of a form comprise the space occupied by the two crossbars and their accompanying furniture. They divide the form into four sections, and all extra space not needed for the other margins is thrown into the "gutter." If only one bar is used, or neither, the spaces in which they naturally belong are termed "gutters."

PROOFS

Even rolling will give an even deposit of ink; a heavy pressure will deposit more ink than a light one; a very light pressure will remove some of the ink already deposited unless the roller is greatly overloaded with ink; on solid blocks of large surface a slow and heavy rolling will give a more effective inking with the use of less ink than a more rapid rolling with lighter pressure; to ink a form with the least amount of ink, carry less on the rollers and roll oftener with full pressure.

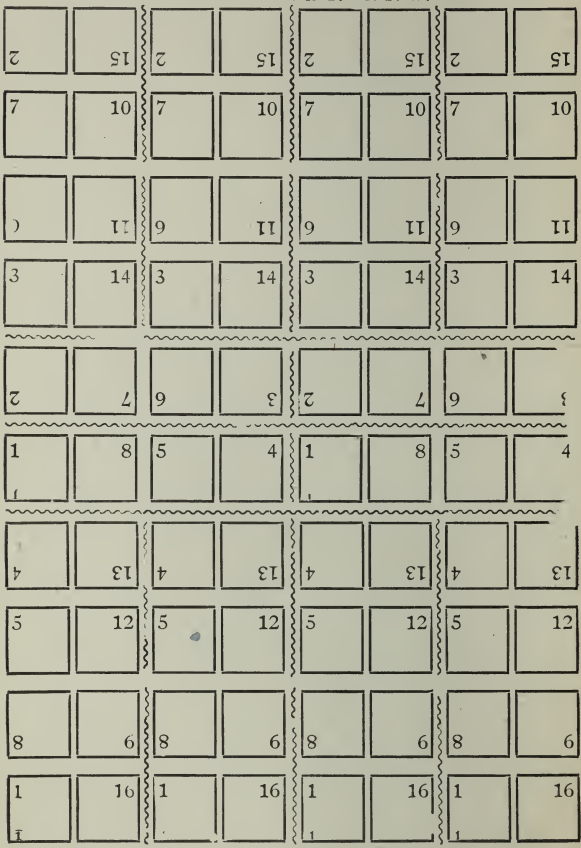
If stone proof is taken on a sheet covering the whole section, the "outside" may be folded as the sheet is being lifted from the form, thus leaving the printed pages where they belong—on the outside; the proof of the inside section must be lifted entirely off of the form before it can be folded, as the printed pages must be folded in.

If single-page proofs are taken, begin with last page to remove from type. The best way is to prove form on sheets that cover two paired pages—that is, in a 16-page form, use eight sheets, then assemble as they will appear in the finished job. Errors in placing pages are readily discovered, the proof is more easily taken and the result is fully as satisfactory as when the whole form is proved on one sheet.

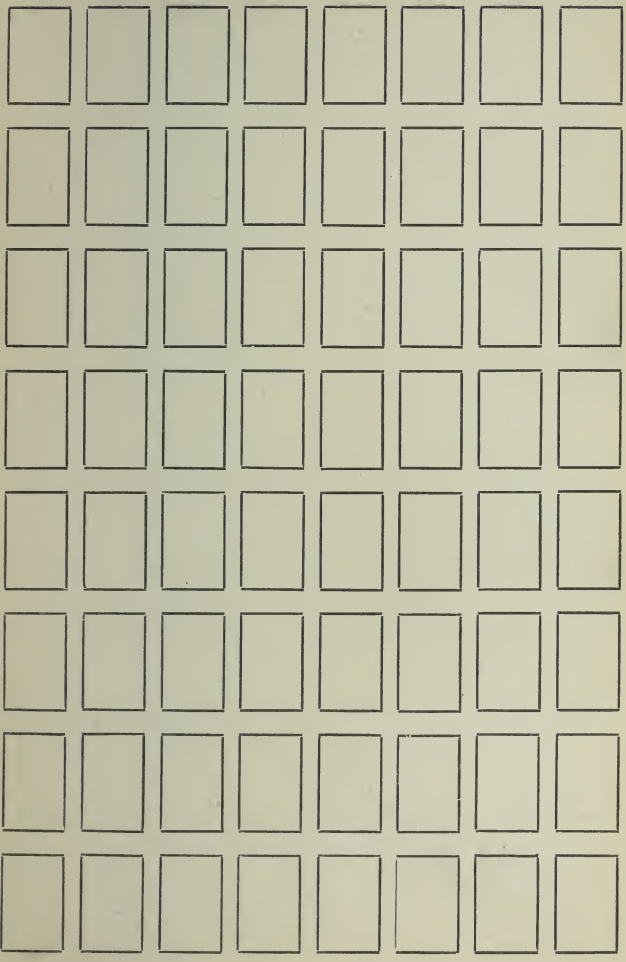
Plan 91 is made up of six continuous 12's—the upper half running the long way of form being three 12-page sections, beginning with 1, 13, 25; for Dexter Single Marginal Book Folder; the lower half, beginning with 37, 49, 61, for Dexter Newspaper and Periodical Folder. Side stitch.

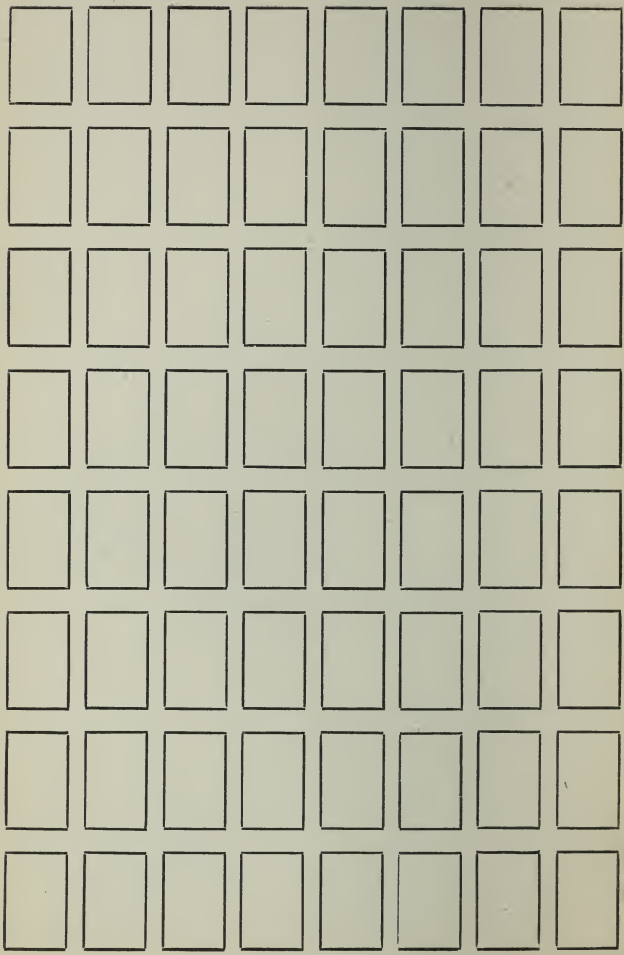
Eighty Pages--Four 16's, Two Long 8's

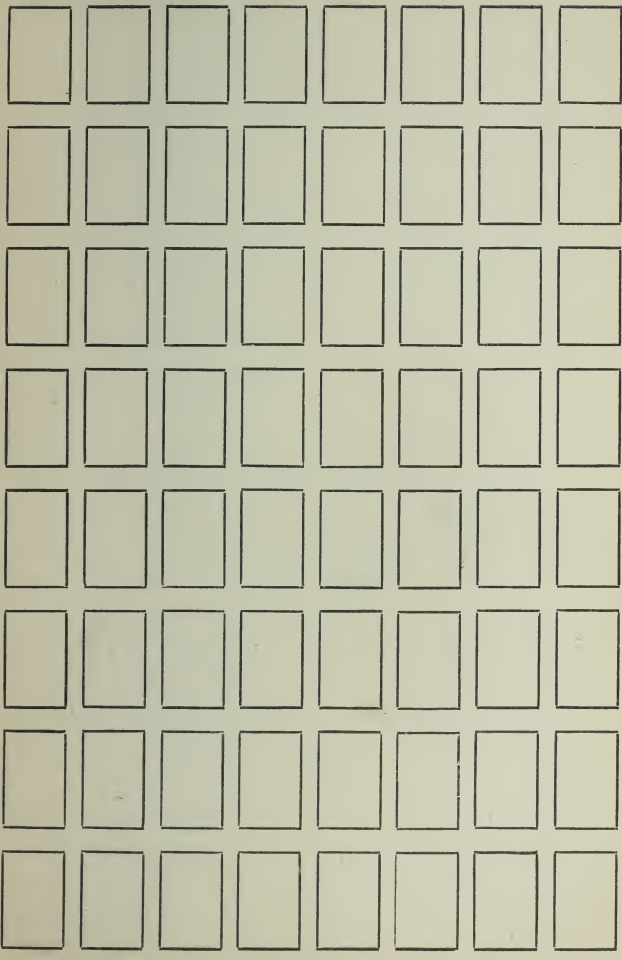
92—PLAN—W. & T. OR S.-W.

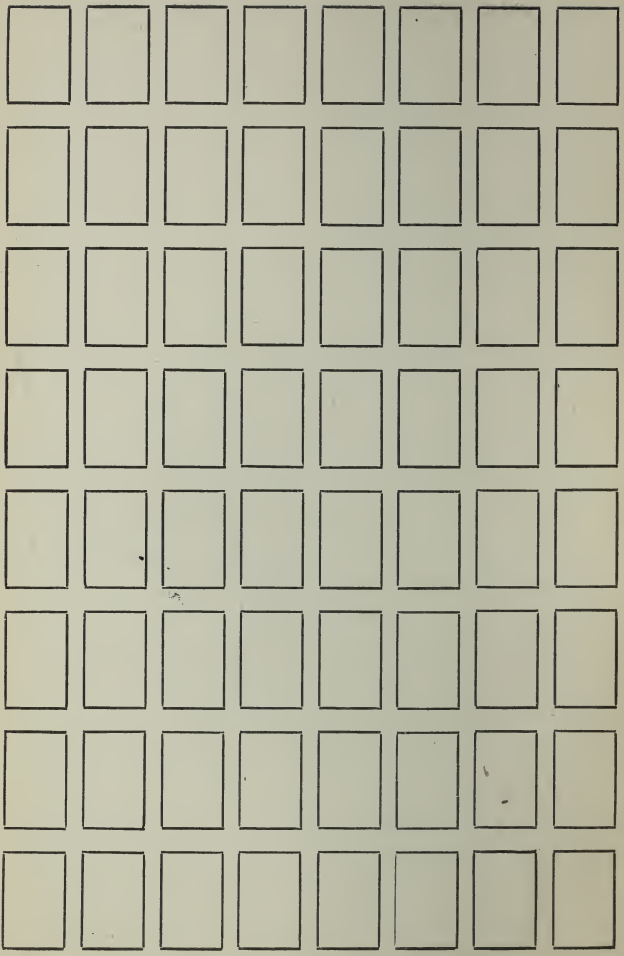


Plan 92 is made up of four duplicate 16's for Dexter Quad' Book Folder. with two hand fold long 8's in center of form









Hold this paper down so that it covers the two 16's in center, and remainder of this plan (93) shows two double 16's inserted and delivered as two 32's—both Chambers and Dexter double 16 Folder.

Ninety-Six Pages--Two 32's, Two 16's

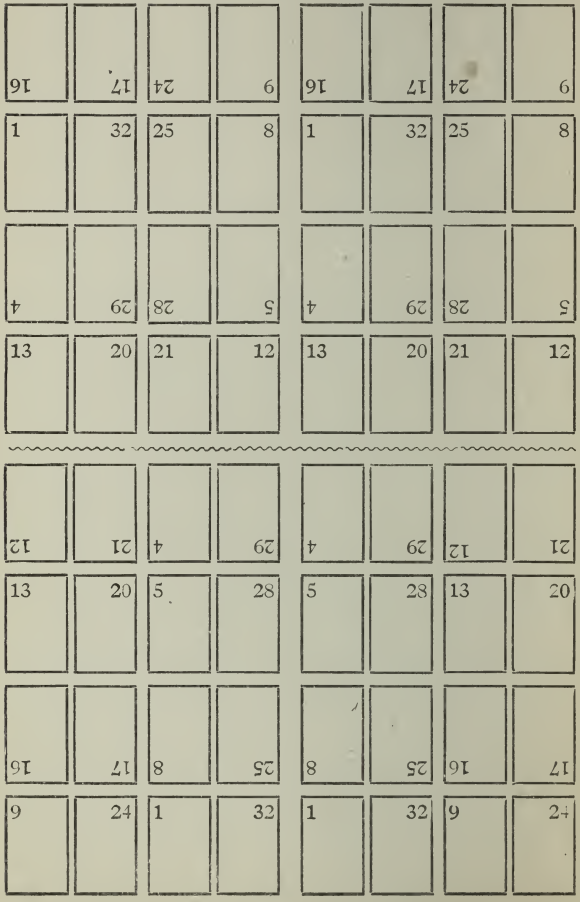
93—PLAN—W. & T. OR S.-W.

42	55	34	63	2	31	10	23
47	50	39	58	7	26	15	18
46	51	38	59	6	27	14	19
43	54	35	62	3	30	11	22
72	73	76	69	88	68	92	85
65	80	77	68	81	96	93	84
66	79	78	67	82	95	94	83
71	74	75	70	87	90	91	86
44	53	36	61	4	29	12	21
45	52	37	60	5	28	13	20
48	49	40	57	8	25	16	17
41	56	33	64	1	32	9	24

—CUT HERE ON FOLDER—

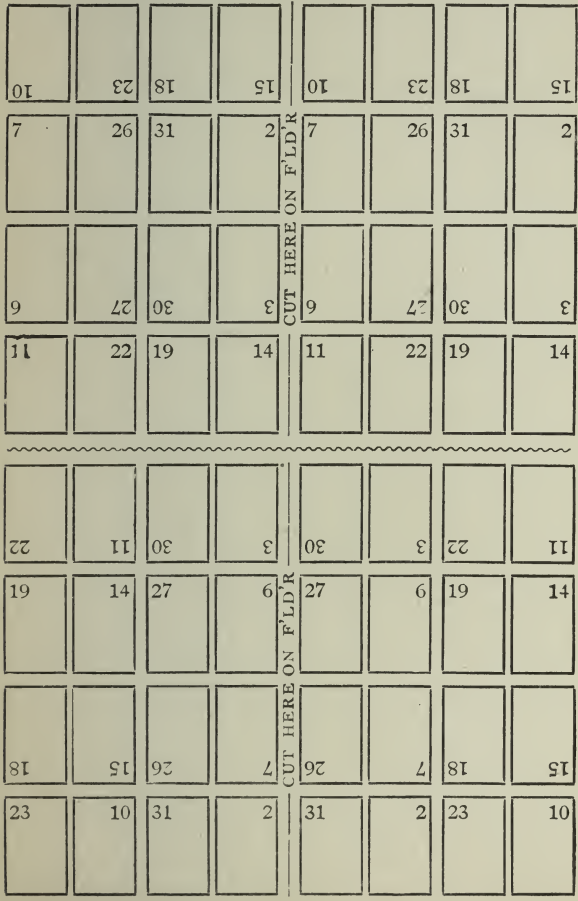
128 Pages—Two Plans for

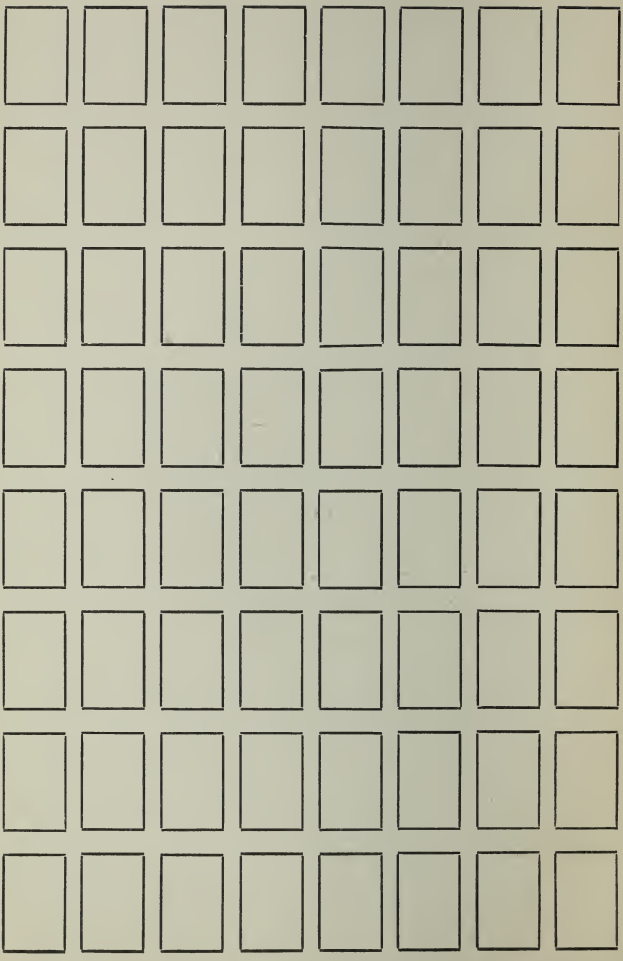
94—PLAN—W. & T. OR S.-W.—UPPER AND LOWER HALVES



the Duplicate Sextodecimo

MADE UP OF TWO SEPARATE DUPLICATE 32-PAGE FORMS.





Lockup

The inside measurement of the chase should be the same as the size of the stock to be used.

Learn from the pressman, if possible, before locking up form, what press is to be used, so that form may be made up and "chased" to suit the press.

Select the proper chase; use crossbars if the form is heavy; decide what furniture will be needed and get it with as few trips to the rack as possible; head and foot furniture should be a trifle shorter than the width, and side furniture slightly longer than the length of the page. Untie central pages first. Place quoins to drive toward crossbars, tighten enough to hold type in position; examine pages for defects, plane gently, the high and low portions separately; tighten quoins all around; ink and prove; clean form; tighten quoins again and lift form, placing a quoin (small end in) under each side of chase near the center; try each and every piece of the printing surface to ascertain if it will "lift"; wherever there is anything loose place a bit of paper or card; let the form down, unlock and remedy the defects at the points shown by the bits of paper; relock, lift and try for loose surfaces. Continue this process until the form may be lifted with perfect safety. Take good care of material, place it where it belongs after use and do all your work in an orderly manner.

Place the "gripper edge" of form near enough to the chase to meet the requirements of the press on which the form is to be printed.

Examine the page numbers carefully in their order, as a safeguard against error before untying pages.

Gripper margins determine the manner of the lockup. The "gripper edge" is that edge of the sheet which is caught by the grippers when it is "fed" into the press. The gripper edge of a form the printed sheets from which are to be folded on machine is usually the same for the press as required by the machine. Sometimes this gripper edge is nearest the low folio—sometimes on the opposite edge. The stoneman will need to learn

these details from the pressman or the folderman when beginning work in a new shop or when he has to make up a form that must be handled in a special manner in the pressroom and bindery. In fact it should always be the desire of the stoneman to know the requirements of the pressman and binder, so far as they relate to his part of the work, in order that every job may be handled successfully and at least expense in the other departments.

The short, safe and sane method of lockup is that which gives equal pressure at side and foot to each and every type unit in the form. Stonework is the last stage in the work of preparing type for the press, and must be done with accuracy and speed. If the caseman and makeup have done their duty, the stoneman will have little trouble in locking the form.

It is not possible to lock a form properly if a lead, slug, rule, reglet, line or furniture, is too long; or if blocks are irregular; or if borders do not fit; or if furniture or chase is not true. Such a form, if it reaches the press, will "work up." Too many underlays will give the form a "spring" and cause quads, etc., to rise. Pages with their length parallel with the cylinder require more careful justification and lockup than if they are at right angles with the cylinder.

The correction of faulty justification when page is in the galley, proper attention to panels, borders, etc., in the form, and the exercise of good judgment in locking up, ought to make the work easy, accurate and rapid.

Reglet should always be placed between quoins and good furniture and between quoins and chase.

After a form has been locked for foundry or cylinder press, its squareness should be ascertained by the use of a carpenter's square. Place one arm of the square at heads of page and the other along the sides of pages; "try" the pages of each quarter section of the form; remedy the defects, if any; use a straight edge for "lining" pages at heads and feet; "sight" across form along back, gutter, head and foot margins for errors in placing furniture; use the foot rule in measuring form to determine its fitness in size for the paper to be used.

The Sextodecimo

95—PLAN—W. & T. OR S.-W.—95—FOLD

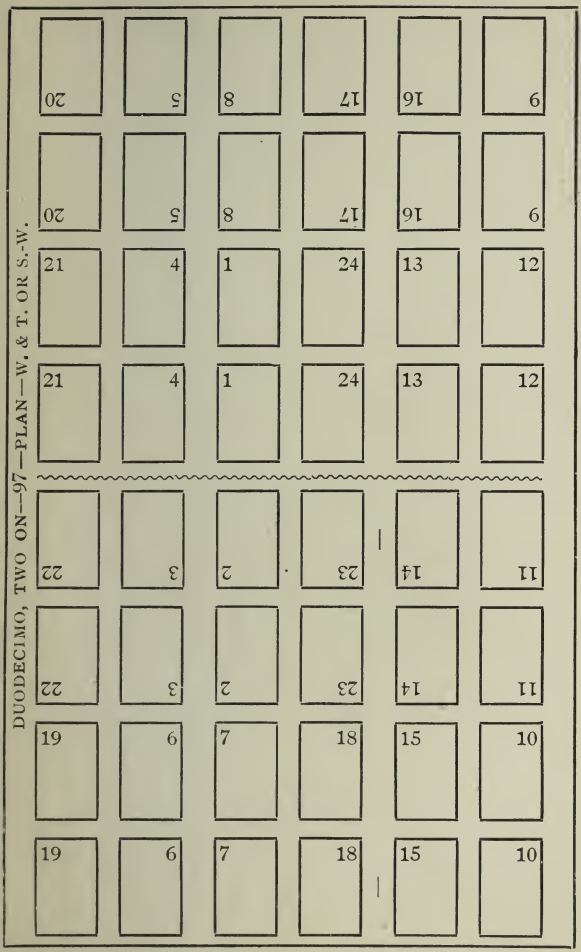
6	11	14	3	4	13	12	5	5	12	13	4	3	14	11	6
6	11	14	3	4	13	12	5	5	12	13	4	3	14	11	6
2	15	10	7	8	9	16	1	8	9	16	1	2	15	10	7
2	15	10	7	8	9	16	1	8	9	16	1	2	15	10	7

The Sextodecimo

96—PLAN—W. & T. OR S.-W.— 96—FOLD

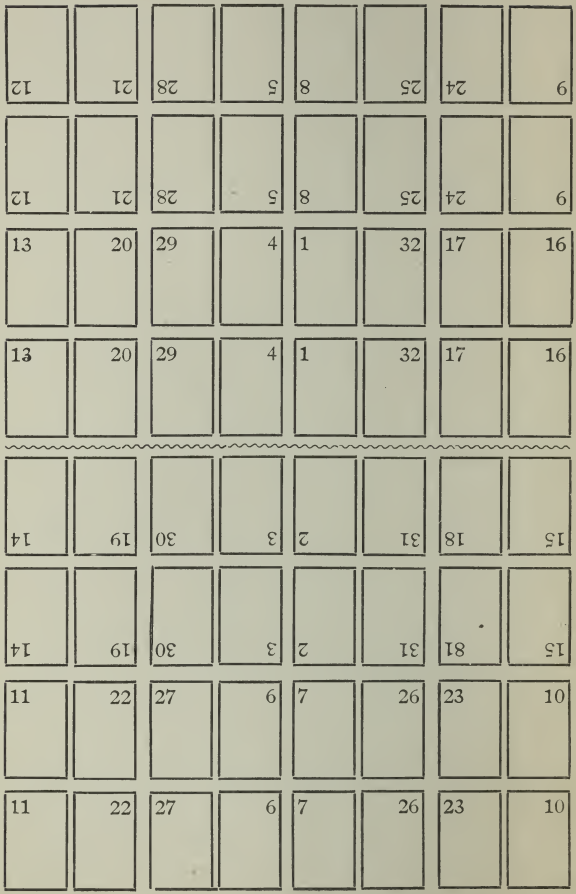
14	3	6	11	12	5	4	13	13	4	5	12	11	6	3	14
15	2	7	10	9	8	1	16	16	1	8	9	10	7	2	15

32 pp., "16 pages two on," for Dexter S. M. Book Folder.


DUODECIMO, TWO ON—97—PLAN—W. & T. OR S.-W.
9 16 17 8 5 20
9 16 17 8 5 20
12 13 24 1 4 21
12 13 24 1 4 21
11 14 23 2 3 22
11 14 23 2 3 22
10 15 18 7 6 19
10 15 18 7 6 19

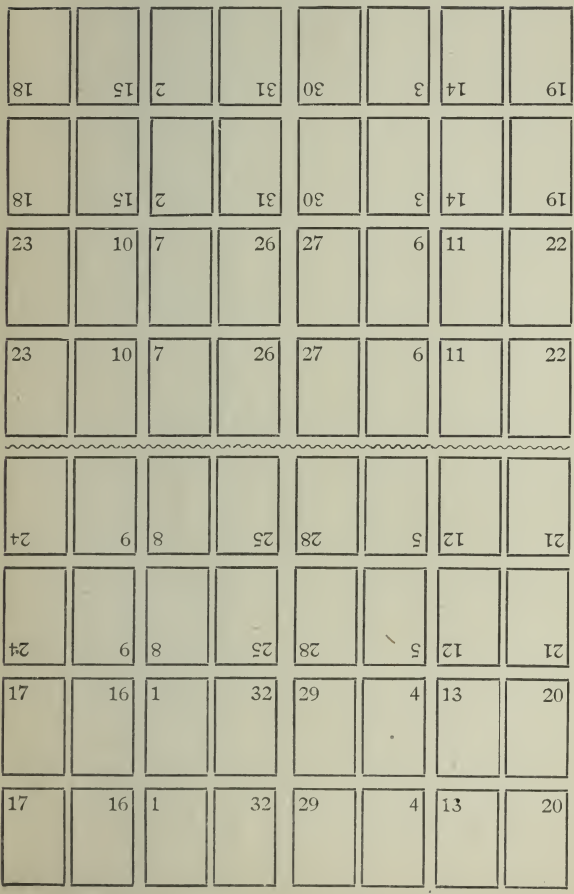
Sextodecimo Two On

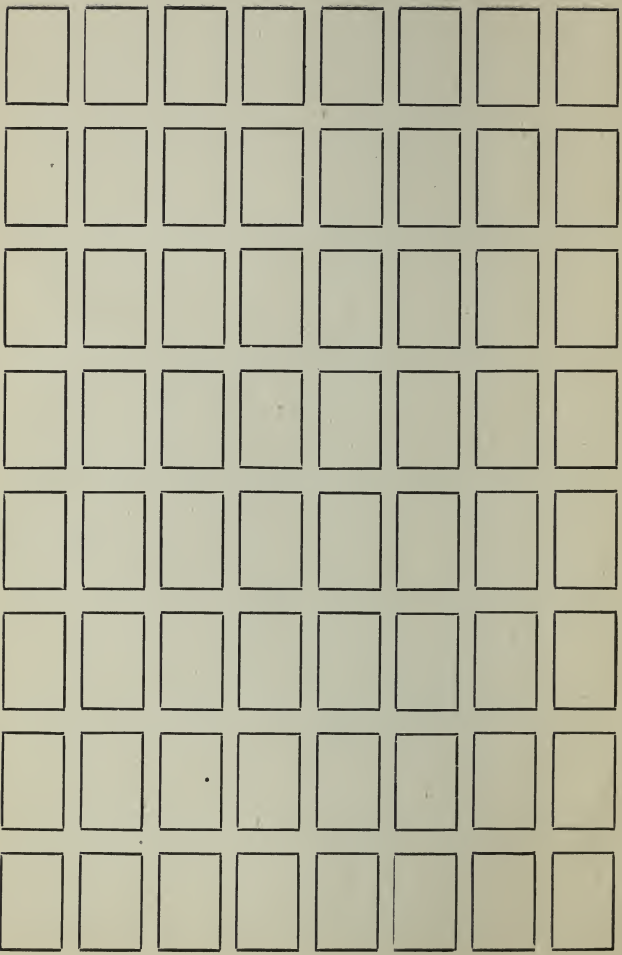
98—PLAN—W. & T. OR S.-W.

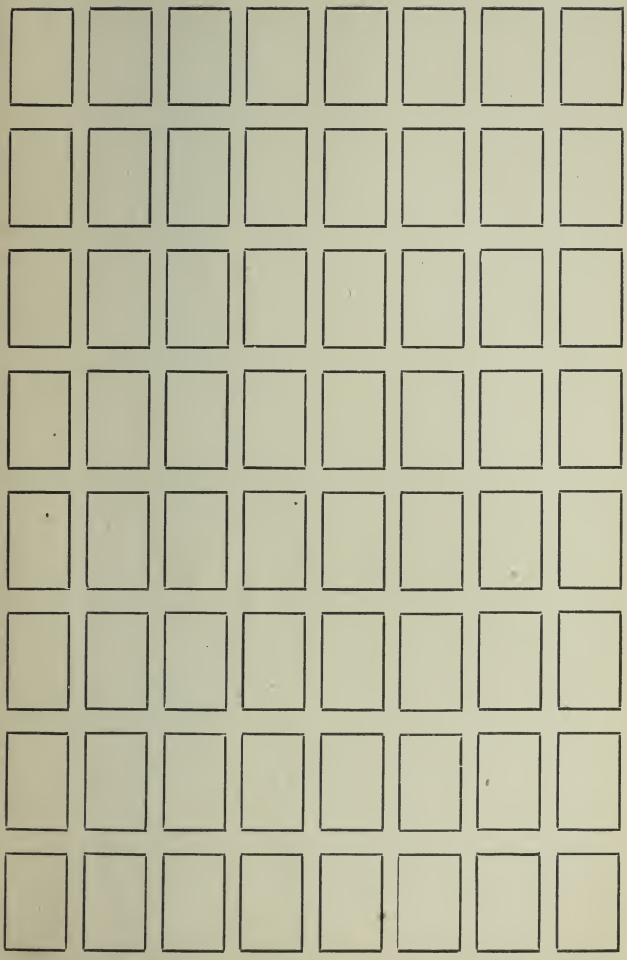


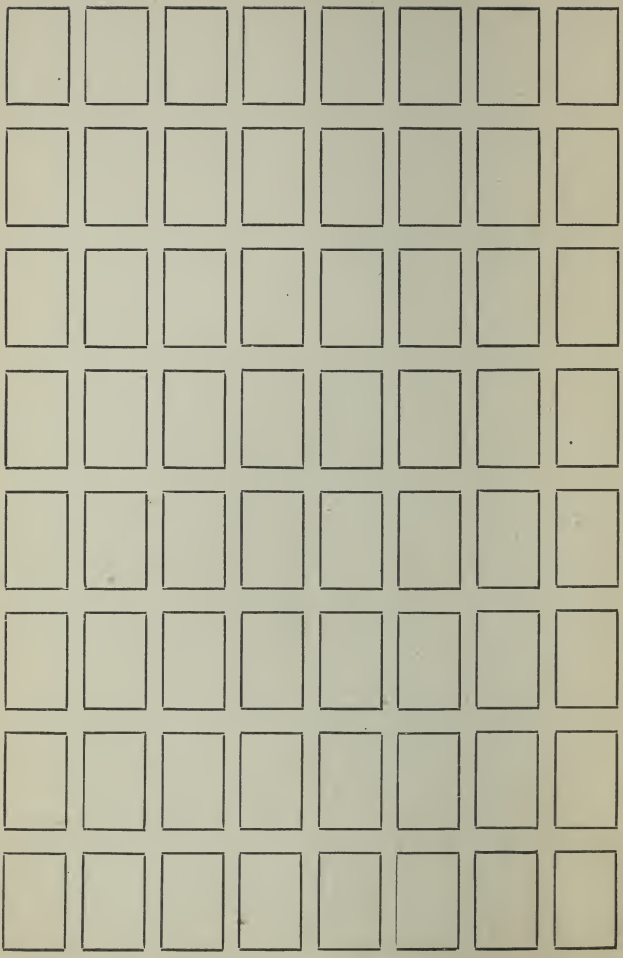
Sextodecimo Two On

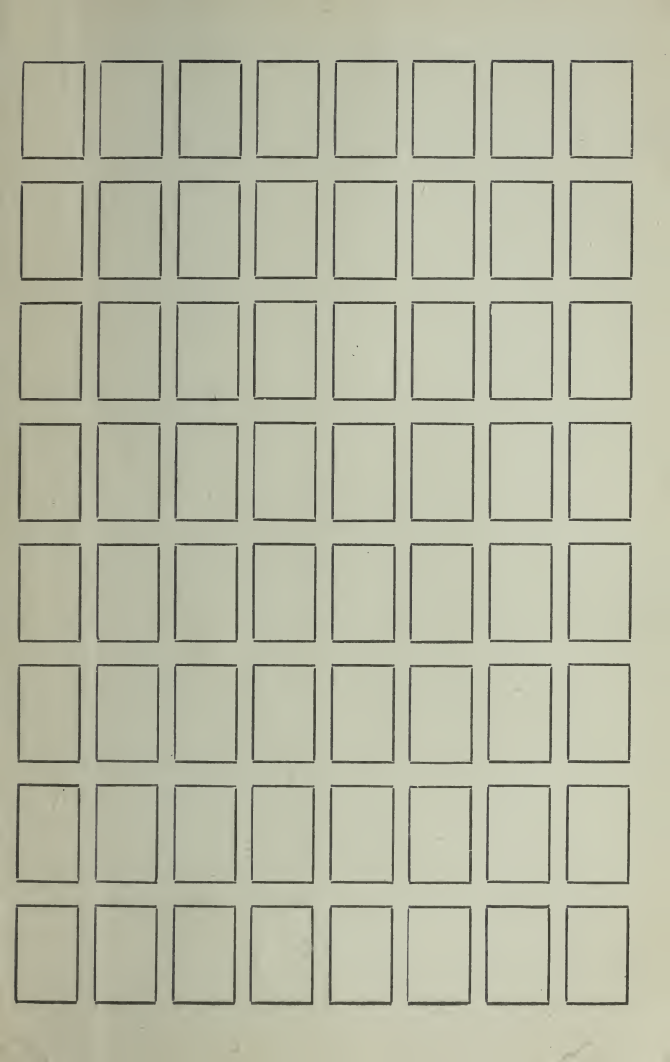
99—PLAN—W. & T. OR S.-W.











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